THE PARTICIPATION AND PERFORMANCE OF STUDENTS WITH EMOTIONAL DISTURBANCE ON STATE ACCOUNTABILITY ASSESSMENT IN READING

A Dissertation

by

CATHERINE ELIZABETH CARR GEORGE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2008

Major Subject: Educational Psychology

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Committee Members, Victor Willson
Patricia Lynch
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Head of Department, Victor Willson

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ABSTRACT

The Participation and Performance of Students with Emotional Disturbance on State Accountability Assessment in Reading. (December 2008)

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Chair of Advisory Committee: Dr. Kimberly Vannest

This study examined the participation rates and performance results of students with emotional disturbance (ED) in a statewide reading assessment. Public school districts in Texas use the Texas Assessment of Knowledge and Skills (TAKS) test in assessing the reading performance of their students in grades 3 through 8 and in grade 10. Factors of gender, ethnicity, cognitive ability, school level socio-economic status and instructional setting in reading were examined.

This study found that 58% of students with emotional disturbance enrolled in grades 3 through 8 and in grade 10 participated in the 2007 TAKS reading assessment. Implications include differences by sub grouping of students with ED. This study also found that 44 % of those students with emotional and behavioral disorders enrolled in the grades who took the test met proficiency standards on the TAKS reading assessment in 2007.

Chi square analysis showed that there is a significant relationship between students' instructional setting in reading and both their participation in and their performance on the TAKS Reading Assessment. Logistic regression analyses results

showed that instructional setting in reading can be used as a predictor of both a student's participation in and performance on the TAKS Reading Assessment.

DEDICATION

To my children

Garrett and Connor

ACKNOWLEDGMENTS

I would like to thank my committee chair, Dr. Kimberly Vannest for her encouragement and support throughout my last few years at Texas A&M University. Thank you, Dr. Vannest, for knowing when to push me and when to lift me up. I would also like to thank my committee members, Dr. Victor Willson, Dr. Patricia Lynch and Dr. Linda Skrla for their support and sage guidance, both personal and professional.

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Thank you to my parents for encouraging me to be a lifelong learner and to always strive for excellence. Thank you to my dear sister, Michelle, for being there when I needed someone to talk to, and, of course, for the occasional reality checks.

My most sincere thanks, appreciation, and love go to my husband, Jake. Without his endless patience, constant support, and excellent culinary skills, I would never have been able to fulfill this dream. In many ways this is a shared accomplishment for both of us. Finally, I owe my thanks and love to our two wonderful sons, Garrett and Connor, for the love, joy, and patience that they have given me over these past several years. It is my heartfelt wish that they, too, will always have the courage to follow their dreams. After all, they taught me to keep steadfast in my faith, and to keep running for first, no matter what.

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CHAPTER I

INTRODUCTION

This chapter introduces a series of three research articles. The line of research in these three manuscripts focuses on students with emotional disturbance and their participation in and performance on a state accountability assessment in the area of reading. These three manuscripts provide readers with a study of current literature surrounding accountability and state assessment as it applies to the academic status of students with emotional disturbance, an analysis of the student and school level factors that may influence the participation and performance rates of these students on state assessments, and a discussion of implications for current practice and future research. Specifically, study one examines participation rates, study two examines performance rates, and study three examines the relationship between instructional setting in reading and student participation and performance on state accountability assessments.

Educators in schools today grapple with a number of challenges (i.e. accountability, teacher recruitment/certification standards, monitoring the effectiveness of program interventions) set forth in the No Child Left Behind Act (NCLB) (Malmgren, McGlothlin, & Nolet, 2005). Accountability is a particular national challenge with regard to students with disabilities. One unprecedented change is the mandatory participation of student with disabilities in annual accountability assessments (McLaughlin & Thurlow, 2003; U.S. Department of Education, 2005a). Additionally,

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This dissertation follows the style of *Exceptional Children.*

states are also required to report on the proficiency results of these students. Adequate yearly progress (AYP) requirements outline specific target expectations of both participation rates and proficiency standards for students with disabilities on statewide accountability assessments (Goertz, 2005; Thurlow & Wiley, 2006).

The available literature on the participation of students with disabilities in statewide accountability assessments is lacking (Thurlow, Ysseldyke, Erickson, & Elliot, 1997; Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezen, Sharp, & Hawes, 2004). Due to the wide variety in state reporting measures, a comparison of state participation rates of students with disabilities is not available (Guy, Shin, Lee, & Thurlow, 1999). According to Thurlow and Wiley (2006) only 35 states reported on both participation and performance of students with disabilities in the 2001-2002 school year and according the National Center for Educational Outcomes, no states report participation data by category of disability.

Questions regarding participation rates, performance results or results by disability currently exist for students with disabilities in statewide assessments (McLaughlin & Thulow, 2003; Malmgren, McGlothlin & Nolet, 2005; Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezen, Sharp, & Hawes, 2004). These questions exist in part due to research findings such as state reports which indicate that the number of students with disabilities who participate in statewide assessments radically varies from state to state (McLaughlin & Thurlow, 2003). Shriner, Ysseldyke, Thulow, and Honetschlager (1994) have also questioned whether or not student participation decisions are made based on appropriate decision-making processes. These

questions are important for the field to answer because of the implications for educational expectations and instructional arrangements.

One implication is that when students with disabilities are provided with a meaningful opportunity to learn academic content, with appropriate accommodations, many can perform well on statewide assessments (Ysseldyke et al. 2004). In fact, according to Reschly, 1993, 98% of the population of students with disabilities have the literacy skills to appropriately participate in statewide assessments. Including students with disabilities in statewide accountability measures leads to improved instruction, and improved outcomes for these students is one of the fundamental assumptions of NCLB and the Individuals with Disabilities Education Act (IDEA) (Ysseldyke et al. 2004; U.S. Department of Education, 2005b). Another implication is that research indicates that when students with disabilities are removed from their content area classes they do not score as well on statewide assessment measures due to a lack of exposure more so than a lack of ability (Shriner et al. 1994). According to Thurlow (2002) students with disabilities historically have been held to lower expectations and have received lower level instruction due to factors other than cognitive ability. Practices such as removal from content area classes and below level expectations have negatively impacted the academic growth and performance of these students (Hardman & Dawson, 2008). Accountability for the performance of all students with disabilities is considered important by many researchers in the field of education (Shriner et al. 1994; Thurlow, 2002; Vannest, Madahaven, Harvey, & Mason, 2008), yet neither the participation nor the performance of these students is clearly articulated in the literature. One sub-

category of students with disabilities, those with emotional disturbance, includes those students with the lowest academic performance characteristics despite abilities in the "normal" range.

Traditionally, students with emotional disturbance earn lower grades, fail more courses, perform academically below their grade level peers, and are more likely to drop out of school (U.S. Department of Education, 2001). Additionally, these students typically experience unsuccessful educational outcomes and post-secondary careers (Trout, Nordess, Pierce, & Epstein, 2003). As a disability group, students with emotional disturbance exhibit serious academic deficits across all content areas (Nelson, Benner, Lane & Smith, 2004; Reid, Gonzalez, Nordess, & Trout, 2004). Students with emotional disturbance performed below grade level in all areas, with reading identified as the area of greatest concern (Trout et al. 2003). Unfortunately, the content area instruction of students with emotional disturbance is often abandoned as educators attempt to remediate behavioral deficits (Barton-Atwood, Wehby, & Faulk, 2005).

Additional research is needed regarding the participation and performance of students with emotional disturbance on statewide accountability assessments and regarding the student and school level factors that affect their participation and performance (Thurlow et al. 2000; Reid et al. 2004; Ysseldyke et al. 2004). The results of statewide accountability assessments may lead to improvements in expectations, instruction, programming and outcomes for students with emotional disturbance (Ysseldyke et al. 2004; Thurlow, Lazarus, Thompson, & Morse, 2005). The three manuscripts in this series provide readers with a study of current literature surrounding

accountability and state assessment as it applies to the academic status of students with emotional disturbance, a descriptive and empirical analysis of the students and school-level factors that may influence the participation and performance rates of students with emotional disturbance on statewide accountability assessments in the participating district, and a discussion of the results and implications for current practice and future research through a series of three studies.

The first manuscript focuses on the participation of students with emotional disturbance in statewide accountability assessments in the area of reading. The purpose of the first research study is to answer the following question: To what extent are students with emotional disturbance participating in state assessment in reading as measured by participation in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading? Descriptive statistics summarize data reflecting the rate of students with emotional disturbance participating in the TAKS assessment in reading. The percent of students with emotional disturbance participating and not participating are reported. Data are tabulated by a frequency count and cross tabulations using SPSS. From the frequency count, percentages are provided for the entire sample of students with emotional disturbance, and are disaggregated by gender, ethnicity, cognitive ability, school socioeconomic status, instructional setting in reading and grade. Findings, implications and conclusions are discussed.

The purpose of the second research study is to answer the following question: To what extent are students with emotional disturbance “meeting proficiency standards” on the state assessment in reading as measured by participation in the Texas Assessment of

Knowledge and Skills (TAKS) state accountability assessment in reading? Descriptive statistics summarize data reflecting the rate of students with emotional disturbance meeting proficiency standards on the TAKS assessment in reading. The percentages of students with emotional disturbance passing and not passing are reported. Data are tabulated by a frequency count and cross tabulations using SPSS. From the frequency count, percentages are provided for the entire sample of students with emotional disturbance, and are disaggregated by gender, ethnicity, cognitive ability, school socioeconomic status, instructional setting in reading and grade. Additionally, a test for proportions was conducted to determine if a relationship exists between instructional setting and student performance on the TAKS Reading Assessment. Findings, implications and conclusions are discussed.

The third research study answers the following questions:

(1) Is there a relationship between the instructional setting in reading for a student with emotional disturbance and his or her participation in a state assessment in reading as measured by participation in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading? and

(2) Is there a relationship between the instructional setting in reading of a student with emotional disturbance and his or her performance on a state assessment in reading as measured by passing or not passing the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?

The Chi-Square procedure and binary logistic regression analysis were used for this study. These analyses determine whether or not significant relationships exist (Glass & Hopkins, 1996) among the TAKS participation and passing rates in reading for students with emotional disturbance among students enrolled in one of the four defined instructional settings in reading. Logistic regression analysis is used to determine the effect specific factors have on the relationship between instructional setting in reading and student participation in and performance on the TAKS Reading Assessment. Findings, implications and conclusions are discussed.

These three studies serve as valuable contributions to the current available literature base. By providing the first known examination of participation, performance and related student and school level factors, such as cognitive ability and instructional setting, these studies provide noteworthy implications for the field of accountability as it relates to students with emotional disturbance. The results of these studies will, hopefully, cause educators to reconsider academic expectations for students with emotional disturbance. Higher academic expectations for these students will lead to changes in instruction, programming, and, ultimately, improved outcomes for this student population group.

CHAPTER II

PARTICIPATION OF STUDENTS WITH EMOTIONAL DISTURBANCE IN STATE ACCOUNTABILITY ASSESSMENT IN READING

Questions and concerns exist regarding the exclusion of students with disabilities from statewide assessments (Gronna, Jenkins & Chin-Chance, 1998; McLaughlin & Thurlow, 2003; Reschly, 1993). These questions exist in part because the number of student with disabilities who are included in state assessment varies from state to state (McLaughlin & Thurlow, 2003). This contributes to a belief that accountability for assessment participation may be ill-defined or that participation decisions are made using a questionable decision-making process (Shriner, Ysseldyke, Thurlow, & Honetschlager, 1994).

Students with disabilities must participate in annual accountability assessments due to the mandates of the No Child Left Behind Act (NCLB) of 2001 (McLaughlin & Thurlow, 2003; U.S. Depatment of Education, 2005b; Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezen, Sharp & Hawes, 2004). Adequate Yearly Progress (AYP) requirements in NCLB have raised the expectation for the percentages of students with disabilities who participate in and perform proficiently on state accountability measures (Malmgren, McGlothlin & Nolet, 2005). One of the fundamental assumptions of NCLB and the Individuals with Disabilities Education Act (IDEA) is that there is a relationship between including students with disabilities in statewide accountability measures to improved instruction and improved outcomes for these students (Ysseldyke et. al. 2004; U.S. Department of Education, 2005a).

Reschly (1993) reports that only two percent of the student population has disabilities so severe as to not have the literacy skills needed to meaningfully participate in statewide assessment. This would suggest that 98% could meaningfully participate, but do they? The literature on participation in statewide assessments is thin (Elliottt, Thurlow, & Ysseldyke, 1996; Thurlow, Olsen, Elliott, Ysseldkke, Erickson, & Ahearn, 1996; Thurlow, Ysseldyke Erickson & Elliott, 1997). Numbers vary to the extent that they are noncomparable (Guy, Shin, Lee, & Thurlow, 1999) and no states report participation data by category of disability (NCEO, 2001). Accountability for the academic performance of students with disabilities is considered valued by most (Vannest, Madahaven, Harvey, & Mason, 2008) but may be most critical for students with disabilities whose academic performance is expected to be at least within normal limits.

Students with emotional disturbance are one of these population groups expected to exhibit academic performance within normal limits. Defined as students who have an inability to learn that cannot be explained by intellectual, sensory, or health factors [Code of Federal Regulations, Title 34, Section 300.7(b)(9)]; (United States Department of Education, 2005a) they characterize students who for all intellectual accounts could be performing on grade level academically.

Accountability for the academic performance of these students is important for a variety of reasons. Students with emotional disturbance have historically experienced unsuccessful educational and post-educational careers, performing one to two years below grade level (Trout, Nordess, Pierce, & Epstein, 2003). Students with emotional

disturbance earn lower grades, fail more courses and are more likely to drop out of school (United States Department of Education, 2001). As a disability group, students with emotional disturbance exhibit serious academic deficits across all content areas (Nelson, Benner, Lane & Smith, 2004; Reid, Gonzalez, Nordess, Trout & Epstein, 2004). Trout et al. (2003) report that none of the students with emotional and behavioral disorders performed on grade level finding that the subject area in which students with emotional disturbance perform lowest in is reading.

The No Child Left Behind Act (NCLB) emphasizes having every student reading by the third grade, so the development of reading skills for elementary students with an emotional disturbance is receiving a good deal of attention (Mooney, Denny & Gunter, 2004). Yet, little research is available regarding the academic status of students with emotional disturbance who are served in a variety of educational settings (Trout et al. 2003). Reid, Gonzalez, Nordess & Trout (2004) found only 25 research studies that focused on academic achievement among students with emotional disturbance, most in restrictive settings, with small student groups (Mooney et al. 2004). Additional research is needed to provide detailed demographic data on students with emotional disturbance and to examine the academic performance of these students within specific academic areas, such as reading (Reid et al. 2004).

The National Research Council reports that students with disabilities are receiving below level instruction when they are cognitively capable of performing on grade level (Thurlow, 2002). It is important that students with disabilities are included in state-wide assessments so that the results can be examined and used to measure student

progress. This data can also be used to determine the need to make changes to a given special education program and to prompt the development of new instructional practices for students (Gronna, Jenkins & Chin-Chance, 1998). The first step in addressing these issues is to determine who is participating and what factors influence participation.

The purpose of this study was to determine the participation rate of students with emotional disturbance on the state mandated accountability assessment in the area of reading. Additionally, this research study examined the relationship of students' instructional settings for reading to their participation in the state assessment in the area of reading. This study will address these issues through an examination of one representative school district in Texas, using the Texas Assessment of Knowledge and Skills (TAKS) assessment. This study will answer the following research question: To what extent are students with emotional disturbance participating in state assessment in reading as measured by participation in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?

Method

This study was conducted in a single, large school district in South-East Texas during the 2006-2007 academic year. This school district is a fast-growing, suburban district with a student population of between 40,000 and 50,000 students. According to the Texas Education Agency Academic Excellence Indicator System 2005-06 District Profile, this district and the state of Texas have the following ethnic distribution (see appendix, Table 1).

Participants and Setting

This study examined the state assessment participation rates of students who are both identified as emotionally disturbed, and receiving special education services. The total population of students with emotional disturbance in one large suburban participating school district was considered for participation in this study. Of the 47,808 students in the district studied, 4,154 (8.7%) receive special education services. Of those 4,154 students in the district studied, 307 (7.4%) are identified as students with emotional disturbance (see appendix, Table 2). This mirrors the percentage of students with emotional disturbance in the state and the country. Of the 48,270,100 students in the United States, 6,634,00 (13%) receive special education services. Of those 6,634,000 students who received special education services, 489,000 (7%) are identified as students with emotional disturbance. Of the 4,505,572 students in the state of Texas, 500,037 (11%) receive special education services. Of the 500,037 students who receive special education in the state of Texas, 37,775 (7.5%) are identified as students with emotional disturbance.

The TAKS assessment in the area of reading for students with emotional disturbance is administered to students enrolled in grades 3 through 12. Students identified as emotionally disturbed who are in kindergarten (K), first, and second grade were not included in this study as these students do not participate in the state accountability assessment. At grades 10 and 11 students take an English/Language Arts test and for students in grade 11, the test is an "exit level" test. Twelfth grade students

who had previously met proficiency standards on the exit level assessment were not included in the study.

Participation criteria for the study included grades three and above, therefore 266 students met the criteria for assessment. Of these 266, 200 (75%) were male and 66 (25%) were female. The ethnic breakdown was as follows: African American students totaled 38 (14%), Hispanic students totaled 40 (15%), White students totaled 186 (70%) and Asian students totaled 2 (1%).

Cognitive ability was examined by reviewing the district database and student folders for the 266 participants. Eight of the 266 intelligence quotients were unavailable. Two scores were reported by category but not by exact quotient. Student intelligence quotients ranged from 60 to 138 and were categorized into one of seven possible classifications: <70 = Intellectually Deficient; 70-79 = Borderline; 80-89 = Low Average; 90-109 = Average; 110-119 = High Average; 120-129 = Superior and >130 = Very Superior.

Socioeconomic status was examined by determining the economic status of the campus as individual student socioeconomic status was not released. Campuses which had at least 35% of their students on free and reduced lunch are considered a low socioeconomic campus. Of the 266 students eligible for this study, 160 (60%) attended a high socioeconomic campus (fewer than 35% percent of the student population received free or reduced lunch) and 106 (40%) attended a campus considered a low socioeconomic campus (where more than 35% of the students received free or reduced lunch).

Twenty-four (9%) of the participants were instructed in a self-contained setting for all subjects, including reading. Fifty-six (21%) received their reading in a resource setting. Ninety-one (34%) received in class support during reading instruction and the remaining 95 (36%) were in a general education setting for reading.

Of the 266 students with emotional and behavioral disorders who were eligible for this study, 18 (7%) were in 3rd grade, 30 (11%) were in 4th grade, 27 (10%) were in 5th grade, 36 (14%) were in 6th grade, 22 (8%) were in 7th grade, 33 (12%)were in 8th grade, 44 (17%) were in 9th grade, 35 (13%) were in 10th grade, 19 (7%) were in 11th grade and 2 (1%) were in 12th grade.

Procedures

This study was conducted by researchers with a combined 26 years of special education and public school experience. The researchers obtained permission to conduct the study in the identified district by submitting a proposal to the district's central administration office. After permission was granted the researchers had access to both district databases and individual student files.

Data Collection

Local school district personnel record student participation results annually into a district database and this information is accessed by the researchers using a local computer system. Student participation information was obtained from the April 2007 test administration, coded, and recorded by hand on the form as Participated = 1, Exempt = 2, and Other = 3. "Other" represents student absences.

Individual student data collected from the database also included: student grade level, instructional arrangement, ethnicity, gender, enrolled school, and participation in the TAKS reading assessment. Additional information such as provision of a reading Individual Education Plan (IEP), service delivery setting for reading instruction and student intelligence quotient was then collected and recorded by reviewing individual student profiles. These individual student files are located on the campus at which the student is enrolled. Data collection reliability was addressed by having researchers verify a sample of all files for data collection accuracy. Twenty-two percent of all files were re-reviewed for data reliability. Data reliability was 0.97. This was computed using joint probability of agreement. Reliability scores close to 1.0 indicate high reliability (Cohen, Cohen, West and Aiken, 2003).

Instrumentation

The TAKS assessment is the standardized test used to measure student learning in the state of Texas. Following a mandate by the 76th Texas legislature, the TAKS assessment was first administered during the 2002-2003 school year. The TAKS is used to measure student performance in the statewide reading curriculum at grades 3-9 and in English/Language Arts at grades 10 and 11. Students must perform satisfactorily on the TAKS assessment at grade 11 in order to receive a high school diploma.

The TAKS test is a standards-based assessment and is therefore based on the content it purports to assess. Accordingly, test validity is content-based and is reported to be closely aligned to the Texas state curriculum (Texas Education Agency, 2005). This purposeful alignment with the curriculum was designed by several educators from across

the state. Issues considered included: test objectives, student expectations, test item types and field test administrations. Test items were reviewed by item writers, educators, test developers, and national testing experts to ensure alignment with the state curriculum. There specific review procedures provide strong evidence for the content validity of the TAKS assessment (Texas Education Agency, 2005).

In addition to content validity, criterion validity was also considered. A performance data correlation study was conducted to examine the relationship between student performance on the TAKS assessment and student performance on three college readiness measures (Texas Education Agency, 2005). Results indicated that student scores which fell at the 'met performance' level predicted ACT scores of around 20 and SAT scores of around 470 for math. Results indicated the student scores which fell at the 'met performance' level predicted ACT scores of around 18 and SAT scores of around 460 in English.

TAKS assessment reliabilities are based on internal consistency measures, specifically the Kuder-Richardson Formula. This formula is appropriate for use with multiple choice, short answer and extended response assessment. Internal reliability measurements for the TAKS assessment range from 0.81 to 0.93 (Texas Education Agency, 2005). Additional information regarding reliability and information regarding standard error of measurement can be found in the Technical Digest (Texas Education Agency, 2005).

Data Analysis

Results from the data collection forms were tabulated to provide a descriptive analysis of the participation of students with emotional disturbance in the TAKS reading assessment. A discussion of the particular analysis related to the research question is presented below.

Research Question: *To what extent are students with emotional disturbance participating in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?*

Descriptive statistics are used to classify and summarize data reflecting the rate of students with emotional disturbance participating in the TAKS assessment in reading. The percent of students with emotional disturbance participating and not participating are reported. Data are tabulated by a frequency count and cross tabulations using SPSS. From the frequency count, percentages are provided for the entire sample of students with emotional disturbance, and are disaggregated by gender, ethnicity, cognitive ability, school socioeconomic status, instructional setting in reading and grade.

Results

A review of the 266 students' files indicated that 155 (58%) were scheduled to participate in the TAKS assessment in reading.

Gender

The gender of test takers (N=155) is distributed as follows: 73% male and 27% female. The distribution of test taking within gender is as follows: 56% of male students who were emotionally disturbed took the TAKS test in reading and 65% of the female

students who were emotionally disturbed took the TAKS test in Reading (see appendix, Table 3).

Ethnicity

The ethnicity of test takers (N=155) is distributed as follows: 9% were African American, 14% were Hispanic, 76% were white, and 1% was Asian. The distribution of test taking within ethnicity is as follows: 34% of African American students who were emotionally disturbed took the TAKS test in Reading, 55% of Hispanic students who were emotionally disturbed took the TAKS test in Reading, 63% of White students who were emotionally disturbed took the TAKS test in Reading and 100% of Asian students who were emotionally disturbed took the TAKS test in Reading (see appendix, Table 4).

School Socioeconomic Status

The school level socioeconomic status of test takers (N=155) is distributed as follows: 66% attended a school with a high socioeconomic status and 34% attended a school with a low socioeconomic status. The distribution of test taking within school-level socioeconomic-status is as follows: 64% of students with emotional disturbance who attended a high socioeconomic campus took the TAKS test in Reading, and 50% of students with emotional disturbance who attended a low socioeconomic campus took the TAKS test in Reading (see appendix, Table 5).

Cognitive Ability

The cognitive ability of test takers (N=152) is distributed as follows: 0% were in the intellectually deficient range, 7% were in the borderline range, 15% were in the low average range, 61% were in the average range, 13% were in the high average range, 3%

were in the superior range, and 1% were in the very superior range. The distribution taking the reading test taking within ethnicity is as follows: 0% of the intellectually deficient students with emotional disturbance took the TAKS test in Reading; 34% of the borderline students; 37% of the low average students; 71% of the average students; 83% of the high average students; 100% of the superior students, and 100% of the very superior students with emotional disturbance (see appendix, Table 6).

Instructional Setting in Reading

The instructional setting in reading (N=155) of test takers is distributed as follows: 6% were in a self-contained setting; 2% were in a resource setting; 40% were in a general education with in class support setting; and 52% were in a general education mainstream setting. The distribution of test taking within instructional setting in reading is as follows: 38% of the self-contained students with emotional disturbance took the TAKS test in Reading; 5% of the resource students; 68% of the in-class support students; and 85% of the mainstreamed students with emotional disturbance took the TAKS test in Reading (see appendix, Table 7).

Grade

The grade level of test takers (N=155) is distributed as follows: 4% were in the 3rd grade; 10% were in the 4th grade; 7% were in the 5th grade; 19% were in the 6th grade; 8% were in the 7th grade; 13% were in the 8th grade; 18% were in the 9th grade; 12% were in the 10th grade; 8% were in the 11th grade; and 1% were in the 12th grade. The distribution of test taking within grade is as follows: 33% of 3rd graders with emotional disturbance took the TAKS test in Reading; 53% of the 4th graders; 41% of the 5th

graders; 81% of the 6th graders; 59% of the 7th graders; 61% of the 8th graders; 64% of the 9th graders; 51% of the 10th graders; 63% of the 11th graders; and 100% of the 12th graders with emotional disturbance took the TAKS test in Reading (see appendix, Table 8).

Discussion

The purpose of this study was to investigate the participation of students with emotional disturbance in a state assessment in reading and to assess factor differences in participation by student level and school level factors including gender, ethnicity, intellectual functioning, grade, instructional setting in reading and school socioeconomic status.

The first finding indicates that nearly one half of the ED population is excluded from state level standardized reading assessment. Fifty-eight percent of students with emotional disturbance in the district studied are being assessed in the area of reading, therefore 42% of this student population is not assessed. This finding that 42% of students with emotional disturbance are excluded from the state assessment in reading is new data for this field of research as this is the first study of its kind. This finding is consistent with the literature that suggests students with emotional disturbance are not well prepared academically, and are not performing on grade level (Thurlow, 2002; Trout et al. 2003; Nelson et al. 2004; & Reid et al. 2004).

The second major finding is the disproportionate distribution by gender of students with emotional disturbance who participate in the test. While a greater number of students with emotional disturbance are male, both in the population of this study and

nationally, females are taking the test at a higher rate (65%) than males (56%). Females may be participating at a higher rate because they may be perceived as more likely to pass the test.

The third finding is the disproportionate distribution of students with emotional disturbance who take the test by ethnicity. Whereas, overall, 58% of students with emotional disturbance take the TAKS test in Reading in this school district studied , White and Asian students take the test at a higher rate (63% and 100%) than African American (34%) and Hispanic (55%) students with emotional disturbance take it at a lower rate. This is consistent with results reported by Bollmer, Betherl, Garrison-Mogren, & Brauen, 2007, and Samuels, 2007.

The fourth finding is in regard to the socioeconomic status of the school. When considering school level socioeconomic status, students who attend a school that has a high socioeconomic status are more likely (66%) to take the test, than students who attend a school that has a low socioeconomic status (34%). These results support research reported by Cook, Cameron, and Tankersly, 2007.

The fifth finding involves the students' intellectual functioning. Students with lower cognitive abilities take the test at a lower rate than those with higher cognitive abilities. Seventy-eight percent of the test takers have cognitive abilities in the average to well above average range. These results are in agreement with findings presented by Fuchs & Young, 2006; and Sabornie et al. 2005, who have identified IQ as a predictor of performance.

The sixth finding is the distribution of students with emotional disturbance who participate in the test is disproportionate by instructional setting in reading. Most of the test takers received their reading instruction in a general education setting either with in-class support, or in a mainstreamed setting with no specialized assistance. Those receiving their reading instruction in a general education classroom took the test at a higher rate (68% and 85%) than those who received their instruction in a special education resource or self-contained classroom (5% and 38%) Those in a resource setting were less likely to take the test than those in any other setting (5%).

Third grade students took the test at a lower rate (33%) than any other grade while the sixth graders took the test at a higher rate (81%) than any other grade, except for the two twelfth grade students who both took the test. Third grade students may be less likely to participate in the assessment due to their young age and the pressures associated with high-stakes testing. It is worth noting that achieving a proficient score on this assessment is a graduation requirement for most students, and it is possible that additional assistance (i.e. tutorials) may be given to older students as they begin to prepare for the test. The other grade level test takers took the test at a rate fairly close to average (41% to 64%).

Limitations

While this study has high reliability and is the first of its kind, it also contains limitations such as generalizability. These data represent only students in one large school district. Using data specific for one district limits the generalizability of data to the district under study. The districts characteristics, however, provide some degree of

opportunity for the current study to be replicated in other districts. This study used the whole population of students with emotional disturbance in one school district. The ethnic distribution and socioeconomic status mirror that of many other districts throughout the state.

Implications

This study informs the general available knowledge base related to students with emotional disturbance. The results of this study calls on school districts to review the number of students with emotional disturbance who are currently participating in statewide assessments. Additionally, school officials will want to examine the characteristics of the students with emotional disturbance who are participating and develop measures to increase appropriate participation in state assessments. Finally, this study reports that students with emotional disturbance who receive their instruction in a general education setting are more likely to participate in state assessment. This finding has significant implications for teacher training and student programming. Teachers should be well trained in appropriate decision-making processes regarding state assessment. Teachers should also be made aware of the increasingly high expectations for students with emotional disturbance set forth by state and federal requirements that govern state assessment. Research-based tools and resources should be made available to teachers to adequately prepare students with emotional disturbance for the opportunity to participate in state assessments. Students with emotional disturbance must have legitimate access and exposure to the general education curriculum on the appropriate grade level in order to meaningfully participate in state assessments.

Conclusions

This study examined the participation of students with emotional disturbance in a statewide reading assessment. We found that nearly half of the students with emotional disturbance do not participate in statewide assessment in reading. Students with emotional disturbance who did participate differed from those who did not participate in the areas of gender, ethnicity, school-based socioeconomic status, cognitive ability, and instructional setting. Additional research should be conducted regarding the relationship between student and school level factors and the academic status of students with emotional disturbance.

One key line of suggested research will be that of examining the performance of students with emotional disturbance on statewide assessments. Results of such a study would further inform the limited literature base surrounding academic outcomes of students with emotional disturbance. Such a study would also inform administrators, teachers and parents on the academic status of students with emotional disturbance.

Additionally, school administrators may want to replicate a similar study that focuses on other disability categories. The current study provided a rich, descriptive picture of the participation of students with emotional disturbance in the statewide assessment for the participating school district. Conducting similar studies which examine variables such as grade level, gender and ethnicity on students from other disability categories will provide school administrators with a detailed descriptive analysis of the critical programs for which they are responsible.

CHAPTER III

PERFORMANCE OF STUDENTS WITH EMOTIONAL DISTURBANCE IN STATE ACCOUNTABILITY ASSESSMENT IN READING

Historically, there have been questions surrounding the decisions made to exclude students with disabilities in state-wide assessments (Gronna, Jenkins & Chin-Chance, 1998; McLaughlin & Thurlow, 2003; Reschly, 1993). Although accountability for all students is essential, this is not the approach most states have taken as evidenced by the fact that the number of students with disabilities who are included in state assessment varies from state to state (McLaughlin & Thurlow, 2003). Additionally, accountability is not simply a matter of tallying students who participated in an assessment; it is also evidence that participation decisions were made using an appropriate decision-making process (Shriner, Ysseldyke, Thurlow, & Honetschlager, 1994). Research conducted by the National Center for Education Outcomes (Shriner et al. 1994) found that the philosophy of the building principal influenced the degree to which students with disabilities were included in state accountability systems. Some administrators feared that scores for students with disabilities would adversely affect the school's rating while others questioned the benefit of having students participate in assessments that would be very difficult for them. Interestingly, only about two percent of the student population have disabilities so severe that they would not have the literacy skills needed to meaningfully participate in a state-wide assessment (Reschly, 1993).

When given the opportunity to learn the content and when provided with the appropriate accommodations, students with disabilities can perform well on state-wide

accountability assessments (Ysseldyke et al. 2004). When students are pulled from content area classes they do not score as well due to their lack of exposure, not due to their lack of ability (Shriner et al. 1994). The National Research Council suggests that students with disabilities have ultimately been placed at a disadvantage because they have not been held to high expectations and the curriculum to which they have been exposed to has been 'watered down' unnecessarily (McDonnell et al 1997 in Thurlow, 2002). Students with disabilities have traditionally been held to lower expectations due to factors other than cognitive ability alone, and thus have received lower level instruction (Thurlow, 2002). Hence the academic growth of students with disabilities has actually been hindered due to low expectations and the lack of exposure to the general education curriculum.

One group of students typifies the issues of low expectations and lack of exposure to the general education curriculum to a marked degree. Students with emotional disturbance are defined as students with an inability to learn that cannot be explained by intellectual, sensory, or health factors (United States Department of Education, 2005a). Students with emotional disturbance experience unsuccessful educational careers and difficulty with postsecondary employment (Trout, Nordess, Pierce, & Epstein, 2003). Students with emotional disturbance typically earn lower grades, are more likely to fail courses, are at a higher risk of dropping out of school (United States Department of Education, 2001) and exhibit serious academic deficits across all content areas (Nelson, Benner, Lane & Smith, 2004; Reid, Gonzalez, Nordess & Trout, 2004). In a study conducted by Trout et al. (2003) none of the students with

emotional and behavioral disorders performed on grade level and the subject area these students performed lowest in was reading.

With the No Child Left Behind (NCLB) emphasis on having every student reading by the third grade, the development of reading skills for elementary students, including those with an emotional disturbance, is a focal point for many schools (Mooney, Denny & Gunter, 2004). Research indicates that students with emotional disturbance spend almost half of their reading instruction time engaged in independent seatwork (Vaughn, Levy, Coleman, & Bos, 2002). This was found to be the case in both the general education and special education settings (Vaughn, Levy, Coleman, & Bos, 2002). The academic deficits of students with emotional disturbance are commonly ignored while attempting to gain control of a problem behavior (Barton-Arwood, Wehby, & Falk, 2005). These practices negatively impact academic improvement (Barton-Arwood et al. 2005; Vaughn et al. 2002). The ability to read in our culture today is critical (Weaster, 2004), and research shows that reading difficulties in elementary-aged students with emotional disturbance can be remediated with intensive and comprehensive instruction (Barton-Arwood et al. 2005).

Little research is available regarding the academic achievement of students with emotional disturbance served in different instructional settings (Trout et al. 2003). Reid, Gonzalez, Nordess and Trout (2004) found only 25 research studies focused on academic status among students with emotional disturbance. The majority of these studies have been conducted in restrictive settings (Trout et al. 2003) and with small student groups (Mooney et al. 2004). More information is needed regarding the specific

demographics and academic deficits of students with emotional disturbance (Trout et al. 2003; Mooney, Epstein, Reid, & Nelson, (2003); Reid et al. 2004).

It is important that students with emotional disturbance be included in statewide assessments. These results can be examined to inform instruction, to measure student progress, to determine the need for changes in a given special education program and to guide the development of new instructional practices for students (Gronna et al. 1998). The National Research Council reports that although students with emotional disturbance are cognitively capable of performing on grade level, many of these students receiving below-level instruction (Thurlow, 2002). One of the basic tenets of the Individuals with Disabilities Education Act (IDEA) and NCLB is the inclusion of students with disabilities in statewide assessments for the expected improvement in instruction and improved outcomes for these students (Ysseldyke et al. 2004; U.S. Department of Education, 2005a).

The purpose of this study was to examine the performance of students in one school district with emotional disturbance on the Texas state mandated accountability assessment in the area of reading. Additionally, this research study examined whether the students' instructional settings for reading are related to their participation and performance on the state assessment in reading. This study will answer the following research question: To what extent are students with emotional disturbance meeting proficiency standards on a state assessment in reading as measured by passing or not passing the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?

Method

This study was conducted in a single, large school district in South-East Texas during the 2006-2007 academic year. This school district is a fast-growing, suburban district with a student population of between 40,000 and 50,000 students. According to the Texas Education Agency Academic Excellence Indicator System 2005-06 District Profile, this district and the state of Texas have the following ethnic distribution (see appendix, Table 1).

Participants and Setting

This study examined the state assessment educational performance of students who are both identified as emotionally disturbed and receiving special education services. The total population of students with emotional disturbance in one large suburban participating school district was considered for participation in this study. Of the 47,808 students in the district studied, 4,154 (8.7%) receive special education services. Of those 4,154 students in the school district studied, 307 (7.4%) are identified as students with emotional disturbance. This mirrors the percentage of students with emotional disturbance in the country and the state. Of the 48,270,100 students in the United States, 6,634,000 (13%) receive special education services. Of those 6,634,000 students who received special education services, 489,000 (7%) are identified as students with emotional disturbance. Of the 4,505,572 students in the state of Texas, 500,037 (11%) receive special education services. Of the 500,037 students who receive special education in the state of Texas, 37,775 (7.5%) are identified as students with emotional disturbance.

The TAKS assessment in the area of reading for students with emotional disturbance is administered to students enrolled in grades 3 through 12. Students identified as emotionally disturbed who are in kindergarten (K), first, and second grade were not included in this study as these students do not participate in the state accountability assessment. At grades 10 and 11 students take an English/Language Arts test and for students in grade 11, the test is an "exit level" test. Twelfth grade students who have already passed the exit level assessment were not included in the study.

The researcher determined that 266 students met the criteria for assessment based on grade level and were therefore eligible for inclusion in this study. Of these 266, 200 (75%) were male and 66 (25%) were female. The ethnic breakdown was a follows: African American students totaled 38 (14%), Hispanic students totaled 40 (15%), White students totaled 186 (70%) and Asian students totaled 2 (1%).

Socioeconomic status was examined by determining the socioeconomic status of the campus as individual student socioeconomic status was not released. Campuses which had at least 35% of their students on free and reduced lunch are considered a low socioeconomic campus. Of the 266 students eligible for this study, 160 (60%) attended a high socioeconomic campus (fewer than 35% percent of the student population received free or reduced lunch) and 106 (40%) attended a campus considered a low socioeconomic campus (more than 35% of the students received free or reduced lunch).

Cognitive ability was examined by reviewing the district database and student folders for the 266 participants. Eight of the 266 intelligence quotients were unavailable. Two scores were reported by category but not by exact quotient. Student intelligence

quotients ranged from 60 to 138 and were categorized into one of seven possible classifications: <70 -1 = Intellectually Deficient; 70-79 – 2 = Borderline; 80-89 – 3 = Low Average; 90-109 – 4 = Average; 110-119 – 5 = High Average; 120-129 – 6 = Superior and >130 – 7 = Very Superior.

Twenty-four (9%) of the participants were instructed in a self-contained setting for all subjects, including reading. Fifty-six (21%) received their reading in a resource setting. Ninety-one (34%) received in class support during reading instruction and the remaining 95 (36%) were in a general education setting for reading.

Of the 266 students with emotional and behavioral disorders who were eligible for this study, 18 (7%) were in 3rd grade, 30 (11%) were in 4th grade, 27 (10%) were in 5th grade, 36 (14%) were in 6th grade, 22 (8%) were in 7th grade, 33 (12%) were in 8th grade, 44 (17%) were in 9th grade, 35 (13%) were in 10th grade, 19 (7%) were in 11th grade, and 2 (1%) were in 12th grade.

Procedures

This study was conducted by researchers with a combined 26 years of special education and public school experience. The researchers obtained permission to conduct the study in the identified district by submitting a proposal to the district's central administration office. After permission was granted the researchers had access to both district databases and individual student files.

Data Collection

A data collection form was used for collecting and organizing information on each participant (students identified as emotionally disturbed within the district). The

form allowed the researchers to collect and organize relevant de-identified student data and to check reliability.

Local school district personnel record student performance results annually into a district database and the researchers using a local computer system accessed this information. Student performance information was obtained from the April 2007 test administration, coded and recorded by hand on the data collection form as Passed = 1, and Did not pass = 2.

Individual student data collected from the database also included: student grade level, instructional arrangement, ethnicity, gender, enrolled school, and participation in the TAKS reading assessment. Additional information such as provision of a reading Individual Education Plan (IEP), service delivery setting for reading instruction and student intelligence quotient was then collected and recorded by reviewing individual student profiles. These individual student files are located on the campus at which the student is enrolled. Data collection reliability was addressed by having researchers verify a sample of all files for data collection accuracy. Twenty-two percent of all files were re-reviewed for reliability. Data reliability was 0.97. This was computed using joint probability of agreement. Reliability scores close to 1.0 indicate high reliability (Cohen, Cohen, West and Aiken, 2003).

Instrumentation

The TAKS assessment is the standardized test used to measure student learning in the state of Texas. Following a mandate by the 76th Texas legislature, the TAKS assessment was first administered during the 2002-2003 school year. The TAKS is used

to measure student performance in the statewide reading curriculum at grades 3-9 and in English/Language Arts at grades 10 and 11. Students must perform satisfactorily on the TAKS assessment at grade 11 in order to receive a high school diploma.

The TAKS test is a standards-based assessment and is therefore based on the content it purports to assess. Accordingly, test validity is content-based and is reported to be closely aligned to the Texas state curriculum (Texas Education Agency, 2005). This purposeful alignment with the curriculum was designed by several educators from across the state. Issues considered included: test objectives, student expectations, test item types and field test administrations. Test items were reviewed by item writers, educators, test developers, and national testing experts to ensure alignment with the state curriculum. There specific review procedures provide strong evidence for the content validity of the TAKS assessment (Texas Education Agency, 2005).

In addition to content validity, criterion validity was also considered. A performance data correlation study was conducted to examine the relationship between student performance on the TAKS assessment and student performance on three college readiness measures (Texas Education Agency, 2005). Results indicated that student scores which fell at the “met performance” level predicted ACT scores of around 20 and SAT scores of around 470 for math. Results indicated the student scores which fell at the “met performance” level predicted ACT scores of around 18 and SAT scores of around 460 in English.

TAKS assessment reliabilities are based on internal consistency measures, specifically the Kuder-Richardson Formula. This formula is appropriate for use with

multiple choice, short answer and extended response assessment. Internal reliability measurements for the TAKS assessment range from .81 to .93 (Texas Education Agency, 2005). Additional information regarding reliability and information regarding standard error of measurement can be found in the Technical Digest (Texas Education Agency, 2005).

Data Analysis

Results from the data collection forms were tabulated to provide a descriptive analysis of the performance of students with emotional disturbance on the TAKS reading assessment. A discussion of the particular analyses related to the research question is presented below.

Research Question: *To what extent are students with emotional disturbance meeting proficiency standards on the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?*

Descriptive statistics are used to classify and summarize data reflecting the performance of students with emotional disturbance on the TAKS assessment in reading. The percentages of students with emotional disturbance passing and not passing are reported. Data are tabulated by a frequency count and cross tabulations using SPSS. From the frequency count, percentages are provided for the entire sample of students with emotional disturbance and are disaggregated by gender, ethnicity, cognitive ability, school socioeconomic status, instructional setting in reading and grade.

Additionally, a test for proportions is used to determine if a relationship exists between instructional setting and student performance on the TAKS Reading

Assessment. This test is considered appropriate as the use of proportions is common when comparing groups on a categorical or nominal variable (Glass & Hopkins, 1996).

Results

A review of the 266 students' files indicated that 155 (58%) were scheduled to participate in the TAKS assessment in reading. Seven students were absent on the day of testing. Of the 148 students with emotional disturbance who participated in the TAKS assessment in reading 117 (79%) met proficiency standards.

Gender

The gender of test passers is distributed as follows: 71% male and 29% female. The distribution of test passing within gender is as follows: 79% of male students who were emotionally disturbed passed the TAKS test in reading and 79% of the female students who were emotionally disturbed passed the TAKS test in Reading (see appendix, Table 9).

Ethnicity

The ethnicity of test passers is distributed as follows: 10% were African American, 10% were Hispanic, 78% were white, and 2% were Asian. The distribution of test passing within ethnicity is as follows: 92% of African American students who were emotionally disturbed passed the TAKS test in Reading; 60% of Hispanic students who were emotionally disturbed passed the TAKS test in Reading; 81% of White students who were emotionally disturbed passed the TAKS test in Reading; 100% of Asian students who were emotionally disturbed passed the TAKS test in Reading (see appendix, Table 10).

School Socioeconomic Status

The school level socioeconomic status of test passers is distributed as follows: 64% attended a school with a high socioeconomic status and 36% attended a school with a low socioeconomic status. The distribution of test passing within school level socioeconomic status is as follows: 77% of students with emotional disturbance who attended a school with a high socioeconomic status passed the TAKS test in Reading. 84% of students with emotional disturbance who attended a school with a low socioeconomic status passed the TAKS test in Reading (see appendix, Table 11).

Cognitive Ability

The cognitive ability of test passers is distributed as follows: 0% were in the intellectually deficient range; 6% were in the borderline range; 12% were in the low average range; 61% were in the average range; 16% were in the high average range; 4% were in the superior range, and 1% were in the very superior range. The distribution of test passing within ethnicity is as follows: 0% of the intellectually deficit students with emotional disturbance passed the TAKS test in Reading; 70% of the borderline students; 67% of the low average students; 79% of the average students; 90% of the high average students; 100% of the superior students, and 100% of the very superior students with emotional disturbance (see appendix, Table 12).

Instructional Setting in Reading

The instructional setting for reading of test passers is distributed as follows: 6% were in a self-contained setting; 3% were in a resource setting; 36% were in a general education with in class support setting, and 55% were in a general education mainstream

setting. The distribution of test passing for reading on TAKS within instructional setting in reading is as follows: 88% of the self-contained students with emotional disturbance passed the TAKS test in Reading; 100% of the resource students; 69% of the in-class support students, and 86% of the mainstreamed students with emotional disturbance passed the TAKS test in Reading (see appendix, Table 13).

Grade

The grade level of test passers on the reading TAKS is distributed as follows: 4% were in the 3rd grade, 11% were in the 4th grade, 9% were in the 5th grade, 18% were in the 6th grade, 9% were in the 7th grade, 10% were in the 8th grade, 19% were in the 9th grade, 9% were in the 10th grade, 10% were in the 11th grade, and 1% were in the 12th grade. The distribution of test passing within grade is as follows: 83% of 3rd graders with emotional disturbance passed the TAKS test in Reading, 81% of the 4th graders, 91% of the 5th graders, 78% of the 6th graders, 77% of the 7th graders, 63% of the 8th graders, 88% of the 9th graders, 59% of the 10th graders, 100% of the 11th graders, and 100% of the 12th graders with emotional disturbance (see appendix, Table 14).

Test for Proportions

In addition to frequency counts and cross tabulations, a test for proportions was conducted to determine if a relationship exists between instructional setting and student performance on the TAKS Reading Assessment (Glass & Hopkins, 1996). The total proportion of students who met performance standards in each of the four instructional settings in reading was as follows: self-contained = .047, resource = .02, in-class support = .284, and mainstream = .439. These results indicate that students in mainstream and in-

class support settings are meeting standards at a higher rate than those in self-contained and resource settings.

Discussion

The purpose of this study was to investigate the performance of students with emotional disturbance in a state assessment in reading and to assess factor differences in performance by student level and school level factors including gender, ethnicity, intellectual functioning, grade, instructional setting in reading and school socioeconomic status. Approximately 44 % of students with emotional disturbance met proficiency standards in the area of reading in the participating school district.

The first finding indicates that just over three-fourths of the population of students with emotional disturbance who took the TAKS assessment in reading met proficiency standards in the spring of 2007. The high number of students with emotional disturbance who met proficiency standards is encouraging. As districts strive to meet compliance standards set forth in state and federal guidelines more and more students will be included in grade level statewide assessments.

The second finding is that although students with emotional disturbance are disproportionately male, the prevalence of passing a state achievement test in reading is equal. While, in this district, a greater number of students with emotional disturbance are male, females (79%) are passing the test at an equal rate to males (79%).

The third finding is the disproportionate distribution of students with emotional disturbance who met proficiency standards by ethnicity. Whereas overall 79% of students with emotional disturbance in this district met proficiency standards on the

TAKS test in Reading, African American, White and Asian students with emotional disturbance pass the test at a higher rate (92%, 81%, and 100%) and Hispanic students with emotional disturbance pass it at a lower rate (60%). The fact that Hispanic students are passing at a lower rate highlights a concern that there is a possible language barrier present for these students. Additionally, results such as these may encourage decision-makers to increase the number of African American students to participate in statewide assessments since when they are given a chance to take such a test, they are at least just as likely to pass it.

The fourth finding is in regard to the socioeconomic status of the school. When considering school-level socioeconomic status, students in this district who attend a school that has a low socioeconomic status are slightly more likely to meet proficiency standards as students who attend a school that has a high socioeconomic status. Results such as these may encourage decision-makers to increase the number of students from low socioeconomic schools to participate in statewide assessments since when they are given a chance to take such a test, they are just as likely to pass it.

The fifth finding involves the students' intellectual functioning. Students with lower cognitive abilities in this district met proficiency standards at a lower rate than those with higher cognitive abilities. Eighty-two percent of the students who met proficiency standards have cognitive abilities in the average to well above average range. However, of those students in the borderline and low average ranges, a majority of the students who took the test did meet proficiency standards (70% and 67%). These are encouraging results for the students in those two ability ranges.

The sixth finding is the distribution of students with emotional disturbance who met proficiency standards on the test is disproportionate by instructional setting in reading. Most of the students who met proficiency standards (91%) received their reading instruction in a general education setting, either with in-class support or in a mainstreamed setting with no specialized assistance. However, those receiving their reading instruction in a special education resource classroom met proficiency standards at a higher rate (100%) than those who received their reading instruction in a general education classroom (69% for in-class support and 86% for mainstream). Students who received their reading instruction in a self-contained classroom passed the test at a similar rate to those in a mainstream setting. Those in a resource setting were most likely to meet proficiency standards (100%) than those in any other setting. However these results must be interpreted with caution as the number of students in a resource setting (3) and in a self-contained setting (8) who took the test was very small. These results are encouraging for students who receive reading instruction in resource or self-contained settings. More students who receive reading instruction in resource and self-contained settings may very well have the ability to meaningfully participate in statewide assessments.

Eighth grade students and tenth grade students met proficiency standards on the test at a lower rate (63% and 59%) than any other grade while the fifth graders met proficiency standards on the test at a higher rate (91%) than any other grade, except for the eleventh and twelfth grade students who all met proficiency standards on the test. Students in the other grade levels met proficiency standards on the test at a rate fairly

close to average (77% to 88%). The high rate of students who meet proficiency standards at grades 11 and 12 may be due to increased tutorial sessions that are made available to these students who are required to pass the test in order to graduate.

Limitations

While this study has high reliability and is the first of its kind, it also contains limitations such as generalizability. These data represent only students in one large school district. This study used the whole population of students with emotional disturbance in the school district. Using data specific for one district limits the generalizability of data to the district under study, or possibly to other districts with characteristics which are highly similar to this district. A limitation in regard to ethnicity is that the possible English Language Learner status of the Hispanic students was not gathered for this study. However, the demographic make-up of the participants in this study closely mirrors that of the district and the state. Therefore, the results of this study provide a positive contribution to the available literature on students with emotional disturbance.

Implications

While any broad generalization of the findings presented in this research study would be misleading, this study does contribute to the general literature base related to students with emotional disturbance. The results of this study call attention to the number of students with emotional disturbance who meeting proficiency standards on the statewide assessment in this Texas school district. This study also provides an examination of student and school characteristics for the students who participated in the

assessment. These results indicate that students served in an in-class support setting for reading are passing the state assessment at a lower rate than the students served in the other settings. This finding calls into question the appropriateness of the in-class support setting for students with emotional disturbance. This finding has far reaching implications for student programming. Research proven strategies and interventions should be readily available to educators in order to provide students with emotional disturbance a meaningful opportunity to participate in state assessment. Additionally, students should be provided with appropriate grade-level instruction in the general education curriculum if they are to legitimately participate in the state assessment in reading.

Teachers and administrators should be very familiar with the decision-making processes related to state assessment. Similar research studies may be conducted by individual school districts in order to inform stakeholders on the performance of students with emotional disturbance, or other disabilities, in their respective districts. This information will undoubtedly prove to be quite informative as administrators develop short and long range plans regarding staff development for teachers and programming for students with emotional disturbance.

Conclusions

The results of this study suggest that when students are given the opportunity to participate in statewide assessments, many will pass. Although only 44% of the total number of students with emotional disturbance in this district met proficiency standards on the statewide assessment, 79% of the actual test takers met proficiency standards.

School administrators may want to replicate a similar study that focuses on other disability categories. The current study provided a rich, descriptive picture of the performance of students with emotional disturbance in the statewide assessment for the participating school district.

CHAPTER IV

PARTICIPATION AND PERFORMANCE OF STUDENTS WITH EMOTIONAL DISTURBANCE IN STATE ACCOUNTABILITY ASSESSMENT IN READING

The No Child Left Behind Act (NCLB) has set a new standard for accountability for students with disabilities. All states are now required to include students with disabilities in statewide assessments and to report on their results. Adequate Yearly Progress (AYP) requirements specify target expectations regarding participation rates and proficiency standards for several subgroups, including students with disabilities (Goertz, 2005; Malmgren, McLaughlin, & Nolet, 2005; Thurlow & Wiley, 2006). While the inclusion of students with disabilities in statewide assessments is an important tenet of education reform, another critical issue is providing these students with an opportunity to learn (Thurlow, 2000).

AYP reporting for students with disabilities may ensure more educational opportunities for students with disabilities. According to Ysseldyke et al (2004) students with disabilities can perform well on statewide assessments when they are provided with appropriate instruction and a meaningful opportunity to learn the general education content. This approach to the instruction of students with disabilities is supported by Congress in IDEA. The 2004 reauthorization of IDEA clearly states that “the education of children can be made more effective by having high expectations for such children and ensuring their access to the general education curriculum in the regular classroom, to the maximum extent possible” (IDEA, 2004).

Another critical issue in accountability is access to the general curriculum by students with disabilities. IDEA continues to mandate the provision of a continuum of services, and the delivery of an Individualized Education Program in the Least Restrictive Environment for all students receiving special education and related services (IDEA, 2004). It is hypothesized that students' exposure to the general education curriculum, and the setting in which they receive this exposure, may affect their ability to meet performance standards on statewide assessments (Thurlow, 2002) Although the participation of students with disabilities in statewide assessments has been controversial, these students demonstrate increased academic performance (Katsiyannis, Zhang, Ryan, & Jones, 2007). While the overall academic performance of students with disabilities is regarded as important by most professionals, it may be most critical for those whose abilities are expected to be within normal limits (Vannest, Mahadevan, Harvey, & Mason, 2008).

Standards-based reform for students with disabilities and the intention to improve academic outcomes through state accountability measures are receiving a good deal of attention (Elliott, Erickson, Thurlow & Shriner, 2000; Thurlow & Wiley, 2006; Katsiyannis et al. 2007). This type of reform is generally intended to provide students with an increased set of knowledge and skills so that they are better able to compete in today's society (Thurlow, 2002). Interestingly, students with disabilities receive additional, unique benefits following this wave of school reform in light of the requirements to include students with disabilities in statewide assessment and to report on their performance. Thurlow (2002) identifies the following benefits students with

disabilities gain through this reform: the need for higher expectations held for students with disabilities, the realization of the low levels of instruction resulting from low expectations, and the lack of information regarding student performance. Additionally, Thurlow (2002) reports that students with disabilities, including students with emotional disturbance, are traditionally held to lower expectations based on factors (i.e. behavior) other than their academic ability.

Students with emotional disturbance are defined as students who have an inability to learn that cannot be explained by intellectual, sensory, or health factors [Code of Federal Regulations, Title 34, Section 300.7(b)(9)]; (United States Department of Education, 2005). Students with emotional disturbance are traditionally educated in more restrictive settings (Hosp & Reschly, 2002) and are held to lower expectations based on reasons (i.e. behavior) other than ability (Shriner et al. 1994). This practice has negatively impacted the academic growth of these students (Hardman & Dawson, 2008).

Inclusion in the general education setting can be difficult for students with emotional disturbance, since their unique behavioral challenges are often exacerbated in the general education setting (Simpson, 2004). These students are at a high risk to earn low grades, to fail classes, and to drop out of school (United States Department of Education, 2001), and they are more likely to experience unsuccessful postsecondary outcomes (Trout, Nordess, Pierce & Epstein, 2003). Students with emotional disturbance generally exhibit academic difficulties across several content areas (Nelson, Benner, Lane, & Smith, 2004; Reid, Gonzalez, Nordess, & Trout, 2004), with the most significant difficulties manifesting in the area of reading (Trout et al. 2003).

Significant reading deficits are especially alarming considering the strong emphasis NCLB has placed on having every student reading by third grade. In response to this emphasis on reading, the reading instruction for students with emotional disturbance is receiving renewed attention (Mooney, Denny, Gunter, 2004). Barton-Atwood, Wehby, and Faulk (2005) found that academic instruction of students with emotional disturbance is often neglected as schools attempt to address behavioral difficulties.

Research on the academic achievement of students with emotional disturbance is lacking (Reid et al. 2004; Sabornie, Cullinan, Osborne, & Brock, 2005) and it is lacking for reading specifically (Vaughn, Levy, Coleman, & Bos 2002). Most of the available research on students with emotional disturbance has been conducted in smaller groups and in more restrictive settings (Mooney et al. 2004). This research rarely considers demographic variables (Trout et al. 2003), demonstrating a need for better and larger studies on specific demographic and school characteristics of students with emotional disturbance, as these factors could influence the academic achievement of these students (Reid et al. 2004). One way to address this issue is by examining statewide assessments results.

Requiring students with disabilities to be included in statewide accountability measures will result in improved instruction, and overall outcomes for these students is a foundational presumption shared by the NCLB and the Individuals with Disabilities Education Act (IDEA) (Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezen, Sharp, & Hawes, 2004; Crawford & Tindal, 2006; Hardman & Dawson, 2008).

Although some states have reported on participation rates for students with disabilities in statewide assessments, there is very little information available regarding actual student performance, and more is needed to inform educators on student progress and programming (Thurlow, House, Scott & Ysseldyke, 2000; Ysseldyke et al. 2004; Thurlow, Lazarus, Thompson, & Morse, 2005).

This research study examines the relationship in one school district of students' instructional settings for reading and their participation in and performance on the state assessment in that area, reading. This study uses one large representative school district in Texas, using the TAKS, the Texas Assessment of Knowledge and Skills assessment. This study will address the following research questions: (1) For students with emotional disturbance, is there a relationship between the instructional setting in reading and participation in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading? (2) For students with emotional disturbance, is there a relationship between the instructional setting in reading and performance on the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?

Method

This study is conducted in a single, large school district in South-East Texas during the 2006-2007 academic year. This school district is a fast-growing, suburban district with a student population of between 40,000 and 50,000 students. According to the State's Academic Excellence Indicator System 2005-06 District Profile, this district and the state of Texas has an ethnic distribution that closely resembles the U.S. in 3 of 5

demographic categories and is slightly more Hispanic and less African American than the U.S. school age population.

Participants and Setting

The total population of students with emotional disturbance in one large suburban participating school district was considered for participation in this study. Of the 47,808 total students in the district, 4,154 (8.7%) receive special education services. Of those 4,154 students in the school district, 307 (7.4%) are identified as students with emotional disturbance (see appendix, Table 2). This mirrors the percentage of students with emotional disturbance in the state and the U.S. Of the 48,270,100 students in the United States, 6,634,000 (13%) receive special education services. Of those 6,634,000 students who received special education services, 489,000 (7%) are identified as students with emotional disturbance. Of the 4,505,572 students in the state of Texas, 500,037 (11%) receive special education services. Of the 500,037 students who receive special education in the state of Texas, 37,775 (7.5%) are identified as students with emotional disturbance.

State assessment in the area of reading is designed for students enrolled in grades 3 through 12. Therefore, students in kindergarten (K), first, and second grade were not included in this study as these students do not participate in the state accountability assessment. At grades 10 and 11 students take an English/Language Arts test and for students in grade 11, the test is an "exit level" test. Twelfth grade students who have already passed the exit level assessment were also not included in the study.

A total of 266 students met the research criteria for assessment based on grade level and disability determination for inclusion in this study. Of these 266 students, 200 (75%) were male and 66 (25%) were female. The ethnic breakdown of the students eligible for study is as follows: White students totaled 186 (70%), Hispanic students totaled 40 (15%), African American students totaled 38 (14%), and Asian students totaled 2 (1%).

Data regarding student cognitive ability was obtained by reviewing the district database and student folders on the 266 participants for individual student intelligence quotients. Of the total 266 students included in the study, eight student intelligence quotients were unavailable. Two of these scores were reported by category, but not by exact quotient, and are included in the study. It is interesting to note that the individual intelligence quotients are normally distributed. Student intelligence quotients ranged from 60 to 138 and are categorized into one of seven possible classifications: <70 -1 = Intellectually Deficient; 70-79 – 2 = Borderline; 80-89 – 3 = Low Average; 90-109 – 4 = Average; 110-119 – 5 = High Average; 120-129 – 6 = Superior, and >130 – 7 = Very Superior.

Socioeconomic status is examined at the school level by determining the status of each campus as individual student socioeconomic status was not released. Of the 266 students eligible for this study, 160 (60%) attended a high socioeconomic campus (where fewer than 35% percent of the student population received free or reduced lunch) and 106 (40%) attended a campus considered a low socioeconomic campus (where more than 35% of the students received free or reduced lunch). The percentage of students

receiving free and reduced lunch on a campus ranged from two percent to sixty-four percent.

Instructional setting is classified by determining the setting in which each student received reading instruction. It should be noted that the continuum of placement options are available to all eligible students and that placement decisions are made by IEP committees. Twenty-four (9%) of the participants were instructed in a self-contained setting for all subjects, including reading. Fifty-six (21%) received their reading in a resource (removed from general education to receive reading instruction from a special education teacher in a special education classroom) setting. Ninety-one (34%) received in class support (educational support from a special education teacher or assistant in the general education classroom) during reading instruction and the remaining 95 (36%) were in a general education mainstream setting for reading.

Data on student grade were also obtained. Of the 266 students with emotional and behavioral disorders who were eligible for this study, 18 (7%) were in 3rd grade, 30 (11%) were in 4th grade, 27 (10%) were in 5th grade, 36 (14%) were in 6th grade, 22 (8%) were in 7th grade, 33 (12%) were in 8th grade, 44 (17%) were in 9th grade, 35 (13%) were in 10th grade, 19 (7%) were in 11th grade, and 2 (1%) were in 12th grade.

Procedures

This study was conducted by two researchers with a combined 27 years of special education and public school experience. The researchers obtained permission to conduct the study in the identified district after submitting a proposal to the district's

central administration office. After permission was granted the researchers were granted access to both district databases and individual student files.

Data Collection

A data collection form was used for collecting and organizing information on each participant (students identified as emotionally disturbed within the district). The form allowed the researchers to collect and organize relevant de-identified student data and to check reliability.

Student participation and performance results are recorded annually into a district data base by local school district personnel. This information was accessed by the researchers using the local computer system. Student participation and performance information were obtained from the April 2007 test administration. These data were then coded and recorded by hand on the data collection form.

Data collected from the database also included enrolled grade level, ethnicity, gender, and enrolled school. Additional information such as provision of an Individual Education Plan (IEP) for reading, instructional setting for reading instruction and student intelligence quotient was then collected and recorded by reviewing individual student files. These individual student files are located on the campus at which the student is enrolled.

Data collection reliability was examined by having researchers verify a sample of all files for data collection accuracy. Twenty-two percent of all files were re-reviewed for reliability. Data reliability was computed using joint probability of agreement and determined to be high at 0.97.

Instrumentation

The TAKS assessment is the standardized test used to measure student learning in the state of Texas. Following a mandate by the 76th Texas legislature, the TAKS assessment was first administered during the 2002-2003 school year. The TAKS is used to measure student performance in the statewide reading curriculum at grades 3-9 and in English/Language Arts at grades 10 and 11. Students must perform satisfactorily on the TAKS assessment at grade 11 in order to receive a high school diploma.

The TAKS test is a standards-based assessment and is therefore based on the content it purports to assess. Accordingly, test validity is content-based and is reported to be closely aligned to the Texas state curriculum (Texas Education Agency, 2005). This purposeful alignment with the curriculum was designed by several educators from across the state. Issues considered included: test objectives, student expectations, test item types and field test administrations. Test items were reviewed by item writers, educators, test developers, and national testing experts to ensure alignment with the state curriculum. There specific review procedures provide strong evidence for the content validity of the TAKS assessment (Texas Education Agency, 2005).

In addition to content validity, criterion validity was also considered. A performance data correlation study was conducted to examine the relationship between student performance on the TAKS assessment and student performance on three college readiness measures. Results indicated that student scores which fell at the 'met performance' level predicted ACT scores of around 20 and SAT scores of around 470 for math. Results indicated the student scores which fell at the 'met performance' level

predicted ACT scores of around 18 and SAT scores of around 460 in English (Texas Education Agency, 2005).

TAKS assessment reliabilities are based on internal consistency measures, specifically the Kuder-Richardson Formula. This formula is appropriate for use with multiple choice, short answer and extended response assessment. Internal reliability measurements for the TAKS assessment range from 0.81 to 0.93. Additional information regarding reliability and information regarding standard error of measurement can be found in the Technical Digest (Texas Education Agency, 2005).

Data Analysis

The chi-square procedure and binary logistic regression analysis were used for this study. These analyses are employed to determine whether or not significant relationships exist among the state participation and passing rates in reading for students with emotional disturbance among students enrolled in one of the four defined instructional settings in reading (Glass and Hopkins, 1996).

Logistic regression analysis was also used to determine the effect specific factors have on the relationship between instructional setting in reading and student participation in and performance on the TAKS Reading Assessment (Cohen, Cohen, West & Aiken, 2003). In the logistic regression analysis instructional setting in reading was added as a category variable. SPSS automatically coded the last group, mainstream, as the reference group. A discussion of specific analyses related to each research question is presented below.

Results

Results are presented according to each of two research questions.

Research Question 1: *For students with emotional disturbance, is there a relationship between the instructional setting in reading and participation in the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?*

A review of the 266 students' files indicated that 155 (58%) were scheduled to participate in the TAKS assessment in reading. Seven students were absent on the day of testing. Of the 148 students with emotional disturbance who participated in the TAKS assessment in reading 117, (79%) passed this state assessment; 117, (44%) of the 266 students with emotional disturbance eligible for inclusion in this study took and passed this state assessment.

Test of Proportions for Participation

A chi square test for proportions was conducted to determine if a relationship exists between grade, gender, ethnicity, IQ, school-level socioeconomic status or instructional setting and student participation in the TAKS Reading Assessment (Glass & Hopkins, 1996). Where noted the effect size is reported using Cohen's w (Sheskin, 2004). Results indicated the following Grade: (N=155) $x^2 = 6.715$, p=.667 ES=0.210 (Cohen's w), Gender: (N=155) z = 6.47, p < .001*, Ethnicity: (N=153) $x^2 = 4.39$, p = .111 ES = 0.153 (Cohen's w), IQ: (N=152) $x^2 = 14.273$, p = .006* ES = 0.312 (Cohen's w), School-level socioeconomic status: (N=102) z = 8.23, p < .001*, and Instructional Setting: (N=155) $x^2 = 41.605$, p = .000* ES = 0.513 (Cohen's w). Significant results were found for gender, school-level socioeconomic status and instructional setting.

Chi- Square Analyses for Participation

The chi-square procedure is used to determine whether or not a significant relationship exists between the student's enrollment in one of four instructional settings in reading and their participation in the TAKS assessment in reading (Glass and Hopkins, 1996). Results indicate a significant association between the instructional setting and participation. The Pearson chi- square value of 100.844 with a significance value of .000 indicates an association between these two variables. A strong effect size is reported using Cramer's V at 0.616 (Faherty, 2007).

Additionally, a significant association was found for school-level socioeconomic status $x^2 = 4.957$, $p = .026$. A weak effect size is reported using Cramer's V = .137 (Faherty, 2007). Chi-square tests for ethnicity and intelligence quotient (IQ) yield results in which more than 20% of the cells had a count of less than 5 and thus are not reported. The chi-square tests for gender and grade are not significant.

Logistic Regression for Participation

A logistic regression analysis indicates participation in the TAKS reading assessment is statistically predicted by instructional setting in reading at the following levels: (a) self-contained (B = 2.266, SE = 0.511, Wald = 19.636, p = .000, Odds Ratio = 9.643); (b) resource (B = 4.627, SE = 0.660, Wald = 49.108, p = .000, Odds Ratio = 102.214) and (c) In Class Support (B = 0.996, SE = 0.367, Wald = 7.375, p = .007, Odds Ratio = 2.706) The Hosmer and Lemeshow test results of $x^2 = .000$, p = 1.00 indicate the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 79% of cases can be classified using

instructional setting in reading. An effect size of 0.466 is reported using Nagelkerke's R^2 (see appendix, Table 15).

Participation in the TAKS reading assessment is also statistically predicted by ethnicity, at one level: African American (B = 1.205, SE = 0.374, Wald = 10.366, p = .001, Odds Ratio = 3.337). The Hosmer and Lemeshow test results of $x^2 = .000$, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 62% of cases can be classified using ethnicity. An effect size of 0.066 is reported using Nagelkerke's R^2 (see appendix, Table 16).

Participation in the TAKS reading assessment is also statistically predicted by school-level socio-economic-status (B = .565, SE = .255, Wald = 4.920, p = .027, Odds Ratio = 1.759). The Hosmer and Lemeshow test results of $x^2 = .000$, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 58% of cases can be classified using school SES. An effect size of 0.025 is reported using Nagelkerke's R^2 (see appendix, Table 17).

Although the initial logistic regression analysis for IQ was not significant, a review of cross tabulations found that none of the students with an IQ below 69 participated in the assessment and all of the students with an IQ above 120 participated in the assessment. These cases were removed and the analysis was run again. With the selected cases removed, participation in the TAKS Reading assessment was statistically predicted by student IQ at the following levels: (a) borderline (B = 1.542, SE = 0.419, Wald = 13.535, p = .000, Odds Ratio = 4.672) and (b) low average (B = 1.442, SE =

0.330, Wald = 19.093, p = .000, Odds Ratio = 4.227). The Hosmer and Lemeshow test results of x^2 = .000, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 69% of cases can be classified using student IQ. An effect size of 0.177 is reported using Nagelkerke's R^2 (see appendix, Table 18).

The removal of subjects with an IQ above 120 and below 69 indicate the need to reexamine data in instructional setting, ethnicity, gender, grade, and school-level socioeconomic status. Logistic regression analysis was conducted again on student instructional setting, removing the student cases with an IQ below 69 and above 120. Instructional setting in reading remains a statistically significant predictor of participation in the TAKS reading assessment at the following levels: (a) self-contained (B = 2.297, SE = 0.552, Wald = 17.332, p = .000, Odds Ratio = 9.949); (b) resource (B = 4.430, SE = 0.663, Wald = 44.665, p = .000, Odds Ratio = 83.929); and (c) in class support (B = 0.863, SE = 0.372, Wald = 5.394, p = .020, Odds Ratio = 2.371). The Hosmer and Lemeshow test results of x^2 = .000, p = 1.00 indicate that the model is considered a good fit for the data. Logistic regression analysis results indicate that using this model 79% of cases can be classified using instructional setting in reading. An effect size of 0.448 is reported using Nagelkerke's R^2 (see appendix, Table 19).

Logistic regression analysis was also conducted on ethnicity, gender, grade, and school-level socio-economic-status, removing the student cases with an IQ below 69 and above 120. Participation in the TAKS reading assessment was statistically predicted by ethnicity at one level: African American (B = 0.912, SE = 0.393, Wald = 5.388, p =

.020, Odds Ratio = 2.489). The Hosmer and Lemeshow test results of x^2 = .000, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 61% of cases can be classified using ethnicity. An effect size of 0.042 is reported using Nagelkerke's R^2 (see appendix, Table 20). No significant results were found among the gender, grade and school-level socio-economic variables.

A logistic regression analysis was conducted using the three statistically significant factors identified in the preceding logistic regression analyses; instructional setting, IQ and ethnicity. Participation in the TAKS reading assessment was statistically predicted by instructional setting at the following levels: (a) self-contained (B = 2.336, SE = 0.584, Wald = 16.006, p = .000, Odds Ratio = 10.341); (b) resource (B = 4.167, SE = 0.676, Wald = 38.036, p = .000, Odds Ratio = 64.539); and in class support (B = 0.786, SE = 0.385, Wald = 4.156, p = .041, Odds Ratio = 2.194) and by student IQ at the following levels: (a) borderline (B = 1.071, SE = 0.516, Wald = 4.304, p = .038, Odds Ratio = 2.919) and (b) low average (B = 1.075, SE = 0.401, Wald = 7.184, p = .007, Odds Ratio = 2.931). Logistic regression results indicate that using this model ethnicity is no longer a statistically significant predictor. The Hosmer and Lemeshow test results of x^2 = 3.497, p = .836 indicate that the model is considered a good fit for the data. Logistic regression analysis results indicate that using this model 79% of cases can be classified using the combined predictors instructional setting in reading and student IQ. An effect size of 0.509 is reported using Nagelkerke's R^2 (see appendix, Table 21).

Research Question 2: *For students with emotional disturbance, is there a relationship between the instructional setting in reading and performance on the Texas Assessment of Knowledge and Skills (TAKS) state accountability assessment in reading?*

Test of Proportions for Performance

A chi square test for proportions was conducted to determine if a relationship exists between grade, gender, ethnicity, IQ, school-level socioeconomic status or instructional setting and student performance on the TAKS Reading Assessment (Glass & Hopkins, 1996). Where noted the effect size is reported using Cohen's w (Sheskin, 2004). Results indicated the following Grade: (N=117) $x^2 = 7.202$, $p = .616$ ES=0.251 (Cohen's w), Gender: (N=117) $z = 9.52$, $p < .001$*, Ethnicity: (N=115) $x^2 = 3.96$, $p = .38$ ES = 0.196 (Cohen's w), IQ: (N=114) $x^2 = 17.834$, $p = .001$* ES = 0.389 (Cohen's w), School-level socioeconomic status: (N=53) $z = 10.33$, $p < .001$*, and Instructional Setting: (N=117) $x^2 = 36.672$, $p = .000$* ES = 0.542 (Cohen's w). Significant results were found for gender, IQ, school-level socioeconomic status and instructional setting.

Chi Square Analysis for Performance

The Chi Square procedure is used for analysis of data to determine whether or not a significant relationship exists among the TAKS performance in reading for students with emotional disturbance and the student's enrollment in one of four instructional settings in reading (Glass and Hopkins, 1996). A review of the cell count numbers indicates that the Chi square analysis could not be used on the initial data input. The self-contained and resource categories are collapsed due to the special nature of these two categories and the low cell count in each one. The reading instruction in these

two categories is based on a student's Individual Education Plan and is specifically delivered by a special education teacher in both settings. Collapsing the cells increased the cell count to an acceptable level and the chi square analysis was conducted.

There is a significant association between the instructional setting and whether or not a student met proficiency standards on the TAKS reading assessment. The Pearson Chi Square value of 6.690 with a significance value of .035 indicates that there is an association between these two variables. A weak effect size is reported using Cramer's V at 0.213 (Faherty, 2007).

Chi Square tests for grade, ethnicity, gender, school level socio economic status, and IQ indicate no significant results. While the gender and school level socio economic status analyses have adequate cell sizes, no significant results exisit. The ethnicity and IQ analysis do not have adequate cell sizes and categories are reconsidered. The ethnicity analysis is conducted again after removing the smallest category, Asian/Pacific Islander. The cell size remains inadequate and thus this analysis is not reported. The IQ analysis is conducted after removing the data on students whose IQ is below 69 and above 120. Cell size remains inadequate so this analysis is not reported.

Logistic Regression for Performance

A logistic regression analysis indicates performance on the TAKS reading assessment is statistically predicted by instructional setting in reading at one level, in class support (B = 0.983, SE = 0.427, Wald = 5.291, p = .021, Odds Ratio = 2.673). The Hosmer and Lemeshow test results of $x^2 = .000$, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in

using this model 79% of cases can be classified using instructional setting in reading. An effect size of 0.076 is reported using Nagelkerke's R^2 (see appendix, Table 22). The chi square statistic for this model was not significant: $x^2 = 7.369$, $p = .061$.

A second logistic regression analysis was conducted on student instructional setting in reading combining students enrolled in a self- contained or resource special education setting due to the low numbers in each of these groups. Performance on the TAKS reading assessment was again statistically predicted by instructional setting in reading at one level, in class support (B = 0.983, SE = 0.427, Wald = 5.291, p = .021, Odds Ratio = 2.673). The Hosmer and Lemeshow test results of $x^2 = .000$, p = 1.00 indicate that the model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 79% of cases can be classified using instructional setting in reading. An effect size of 0.069 is reported using Nagelkerke's R^2 (see appendix, Table 23).

In light of the findings of the previous research question, a third logistic analysis was conducted combining students enrolled in a self- contained or resource special education setting due to the low numbers in each of these group and adding the variable student IQ. Performance on the TAKS reading assessment was again statistically predicted by instructional setting in reading at one level, in class support (B = 0.889, SE = 0.444, Wald = 4.019, p = .045, Odds Ratio = 2.433) The Hosmer and Lemeshow test results of $x^2 = .1.322$, p = .933 indicate that model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 78% of cases can be classified using instructional setting in reading. An effect size of 0.092 is reported

using Nagelkerke's R^2 (see appendix, Table 24). The model chi square statistic for this model was not significant: $x^2 = 8.687$, $p = .122$. No significant relationship was found between the performance on the TAKS reading assessment and IQ.

Finally, in light of the findings of the previous research question, logistic regression analysis was conducted on student instructional setting in reading, combined students enrolled in a self-contained or resource special education setting, student IQ, with select cases removed, and ethnicity. Performance on the TAKS reading assessment was again statistically predicted by instructional setting in reading at one level, in class support (B = 0.909, SE = 0.455, Wald = 3.994, p = .046, Odds Ratio = 2.482) The Hosmer and Lemeshow test results of $x^2 = .5.729$, $p = .572$ indicate that model is considered a good fit for the data. The logistic regression analysis results indicate that in using this model 77% of cases can be classified using instructional setting in reading. An effect size of 0.149 is reported using Nagelkerke's R^2 (see appendix, Table 25). The model chi square statistic for this model was not significant: $x^2 = 14.292$, $p = .074$. No significant relationship was found between the performance on the TAKS reading assessment and IQ or ethnicity.

Discussion

This study investigates the relationship between the instructional setting in reading and the participation and performance on a state reading assessment for students with emotional disturbance, including an analysis of contributing factors such as gender, grade, ethnicity, school-level socio-economic-status and IQ. The relationship of each

factor to either participation or performance on the state assessment in reading will be discussed individually.

Instructional Setting

In the district studied, a statistically significant association exists between a student's instructional setting in reading and participation and performance in the state reading assessment with a strong association for participation (ES = 0.616) and a weak association for performance (ES= 0.213) (Faherty, 2007). This finding highlights a need for consideration of the environment in which students with emotional disturbance receive instruction in reading because if students with disabilities are not included in statewide assessments, they may not receive the benefits of school reform (Thurlow, 2000).

When controlling for IQ and ethnicity, the results from this study indicate students receiving their reading instruction in a self-contained setting, resource or in-class support setting are 10 times, 64 times, and two times, respectively, more likely to be excluded from the test than are their peers who receive reading instruction in a general education mainstream setting. This indicates that, in this district, the largest amount of influence instructional setting has on participation lies within the resource setting and that there are differences in regard to participation across instructional settings. This may be due, in part, to the range in skill levels evident in the district's resource classrooms. This may also be attributed to findings in the literature that suggest that some students with emotional disturbance are placed in special education settings due reasons other than academic ability (Trout et al. 2003) while others may exhibit

academic deficits due to a lack of exposure to appropriate curricular materials (Thurlow, 2002).

This finding is new information for the field. While the literature on a direct relationship between instructional setting and test participation is lacking, Crawford and Tindal (2006) do report that although statewide testing requirements are impacting curriculum and curriculum alignment, these requirements are not having the same impact on instructional practices. This may be due to the inability of educators to interpret test results, their perceived value (or lack of value) of the results, or use their inability to use the results to inform instructional decision making.

Findings of this nature beg the question, do students who are likely to be excluded end up in more restrictive settings (i.e. resource or self-contained settings with specific IEP goals and objectives) or do students who require specially designed IEP instruction in resource or self-contained settings get excluded?

When controlling for IQ and ethnicity, performance results indicate that students in this district who receive their reading instruction in an in-class support setting are more than twice as likely to fail the test as are their peers who receive their reading instruction in a mainstream setting. The minimal change in the odds ratio for in-class support (2.6 to 2.4) after controlling for IQ and ethnicity is informative. These results call attention to the students in the middle – the students with an IQ above 69 and below 120. The results of this study indicate that the students educated in a general education mainstream setting in this district are more successful (as measured by state assessment) than the students who are educated in an in-class support setting. It also appears that

students in this district who are instructed in a resource setting are more successful than those in an in-class support setting; however, due to the very low number (3 out of 3) of students in a resource setting who took and passed the assessment, these results should be interpreted with caution.

The finding that students in this district who receive their reading instruction in an in-class support setting are more than twice as likely to fail the test as are their peers who receive their reading instruction in a mainstream setting raises questions regarding the increased pressure that districts are under to move more children into inclusive settings (Wehby, Lane & Falk, 2003; Roach & Elliot, 2006). Are these students failing the test at a higher rate because of their own skill level or is this due to a lack of appropriate instruction? Are teachers consistently implementing research based interventions with these students? The students in in-class support settings may not possess the skills necessary to meet proficiency standards and may require more intensive, targeted instruction in a special education setting. Polloway, Epstein & Bursuck (2003) question whether learning and achievement may be negatively impacted so that social interactions are given an opportunity to flourish. On the other hand this finding may suggest that the special education support that these students are receiving in the in-class support setting is not appropriate. Many teachers resist providing students with disabilities the necessary accommodations because this would violate classroom standards; however, if these accommodations are not implemented the students' opportunity for success in decreased (Polloway et al. 2003).

The finding that general education students pass at a higher rate is consistent with research (Thurlow, 2002) reporting that exposure to grade level curriculum is needed for students to pass statewide assessments. However, findings of this study suggest that students instructed in general education (with in-class support) did not meet proficiency standards at a rate commensurate to general education peers. In fact, students with in-class support were twice as likely to be excluded from participation, and students participating were twice as likely to fail as compared to their peers in a general education mainstream setting. This is inconsistent with the belief that exposure to grade level curriculum (Hardman & Dawson, 2008; Thurlow, 2002) leads to success.

The degree of impact a student's instructional setting has on their academic performance remains a current topic of debate (Thurlow, 2002; Hardman & Dawson, 2008; Simpson, 2004). Some researchers (Thurlow, 2002; U.S. Department of Education, 2005b) advocate for increased inclusion in general education settings for students with emotional disturbance. Simpson (2004) reports that while inclusion in general education classrooms is a reality for some students with emotional disturbance, empirical research regarding the effectiveness of these programs and the academic benefit realized by students with emotional disturbance is lacking. Others (Gable et al. 2002; Landrum et al. 2003; Sutherland et al. 2008) advocate for a continued continuum of settings from general education large group environments to individual programs.

Although the link between low achievement and problem behavior has been established (Wehby et al. 2003) the research on the directionality of that relationship is inconsistent (Gable et al. 2002; Wehby et al. 2003; & Sutherland et al. 2008). Although

this reciprocal relationship between learning and behavior has not been clearly identified, it has been suggested that academic interventions can mitigate problem behavior (Barton-Arwood, Wehby, & Falk, 2005; Vannest, Mahadevan, Harvey & Mason, 2008). For students with emotional disturbance, the need for behavioral interventions should not always trump the need for academic interventions (Nelson, et al., 2004; Wehby et al. 2003; Vannest et al. 2008). Unfortunately, an increased focus on behavior and a decreased focus on academics has produced a group of students who are not prepared to meet rigorous academic standards (Wehby et al. 2003).

Results such as these provide an argument for having students with emotional disturbance remain in a general education mainstream setting for reading when possible. The results of this study indicate the students who are instructed by a general education teacher in a general education mainstream setting perform better on the state reading assessment that those students who are in an in class-support setting. Research conducted by Thurlow (2002) supports the inclusion of students with disabilities in general education classes largely for the exposure to grade level general education curriculum. Unfortunately, the students receiving in-class support appear to be falling through the proverbial cracks. These results do not tell us why the students in this district are not performing as well as their peers who are instructed in a general education mainstream setting. Possible explanations may include lack of teacher training for the general and/or special education teacher, a lack of collaboration or planning among the teachers, or the lack of consistent and reliable support from the special education support personnel.

Research does tell us that students with emotional disturbance who are functioning in the mild intellectually disabled range will continue to require specialized instruction in a variety of settings (Roach & Elliott 2006; Sabornie et al. 2005) and that some students require unique interventions that are not typically available in general education settings (Landrum et. al. 2003). Overall, it appears that instructional setting is a statistically significant predictor of both participation in and performance on the state reading assessment for students with emotional disturbance in this district. It does appear to have a lesser impact on performance than on participation. Although performance deficits are found in a variety of instructional settings (Reid et al. 2004) the results of this study indicate that performance of students with emotional disturbance is related to their instructional setting. The findings in this study generate a host of questions and therefore additional factors that may contribute to assessment participation and performance data such as intelligence quotient, ethnicity, and school-level socioeconomic status were analyzed.

Intelligence Quotient

The results of this study indicate that for students with an IQ between 70 and 119, IQ is a statistically significant predictor of participation status with a weak association between the two variables (ES = 0.371) (Faherty, 2007). Students with IQ scores above 120 and below 69 were removed from this analysis as there was no variance in participation. All students with an IQ above 120 participated in the test and none of the students with an IQ below 69 participated in the test. This indicates that IQ

scores with a standard deviation above 1.5 or below 2.0 were 100% predicative of participation in the state reading assessment.

Students functioning in the borderline to low average range of intellectual functioning are four times more likely to be excluded whereas students in the high average range are less than half as likely to be excluded as compared to their average peers. This finding indicates that student IQ does impact whether or not students with emotional disturbance participate in state assessment. As IQ increases, so does the participation in the state reading assessment. This finding is new information for the field. Shriner & Wehby (2004) indicated that, currently, researchers in this field are not able to articulate a position regarding the participation of students with emotional disturbance on statewide accountability measures. Although a direct link between IQ and participation has not been made, it stands to reason that there is a practical relationship between the two.

While the results of this study did not find IQ to be a statistically significant predictor of student performance on the state reading assessment, the practical significance that as IQ increases, performance increases, is worth noting. Researchers have identified IQ as a predictor of performance (Sabornie et al. 2005; Fuchs & Young, 2006). Fuchs & Young (2006) found that IQ does predict responsiveness to reading instruction. This is in line with research reported by Sabornie et al. (2005) who found little difference in the IQ performance between students identified as learning disabled or emotionally disturbed, but found significant differences between these two groups and students with mild intellectual disabilities. Their research found that students identified

as learning disabled or emotionally disturbed out performed students with mild intellectual disabilities in IQ and academic domains.

Ethnicity

Overall, ethnicity is not a statistically significant predictor of participation or performance when compared to instructional setting. Interestingly, these results indicate that, independently, that there is a weak, yet statistically significant association between participation status and ethnicity (ES= 0.219) showing African American students to be more than three times more likely to be excluded from the test than are their White peers. However, when controlling for instructional setting and IQ, the odds of an African American student being exclude are reduced from 3.3 to 1.9, and ethnicity is no longer a statistically significant predictor of participation in the state assessment. Additionally, it is worth noting that when controlling for ethnicity and IQ, the odds of a student in a resource setting being excluded are reduced from 83 to 64. This finding suggests that ethnicity, although not a statistically significant variable in this model may influence whether or not a student with emotional disturbance participates in the assessment and the possible practical significance should not be ignored. Are educators allowing racial bias to influence participation decisions in regard to African American students? Are these students further behind academically because they have historically been educated in more restrictive settings?

Additionally, although ethnicity was not found to be a statistically significant predictor of performance on the state assessment results indicate that Hispanic students are 2.2 times more likely to fail the test that are their white peers. This finding indicates

that while ethnicity may influence whether or not African American students with emotional disturbance participate in the state assessment, it does not appear to influence Hispanic student participation to the same degree. Furthermore, while ethnicity does not appear to influence whether or not African American students are passing the state assessment, it does appear to influence whether not Hispanic students pass the assessment. Again, while these particular results are not statistically significant, there does appear to be a possible practical significance for both minority groups. Are educators overlooking possible language barriers when planning programming and instruction for Hispanic students? These incongruent findings support the need for additional research in this area.

Information regarding a possible association between ethnicity and participation or performance on state assessments for children with emotional disturbance is new to the field. The lack of significance related to ethnicity and participation and performance in state assessments is surprising, as it is well documented that African American males are overrepresented in special education programs for students with emotional disturbance (Coutinho, Oswald & Best, 2002; Obiakor & Wilder, 2003; Hosp & Reschly, 2004; Bullock & Gable, 2006; Neel, 2006).

School-level Socioeconomic Status

Overall, school-level socioeconomic status is not a statistically significant predictor of participation or performance when compared to instructional setting. It is worth noting that, independently, a weak, yet statistically significant association between a student's school-level socio-economic-status and participation in the state reading

assessment (ES = 0.137) (Faherty, 2007). Students in this district who attend a school which is considered at risk by low SES are almost twice as likely to be excluded from the test as are their peers who attend a campus which is not at risk. However, when controlling for IQ, school-level socioeconomic status is no longer a statistically significant predictor of participation.

While a statistically significant association between school-level socio-economic status and participation has not been identified, this finding could be related to findings from researchers who have reported that students from a low socio-economic background are at a greater risk for identification as emotionally disturbed (Reid et al. 2004) or a variety of disability conditions (Coutinho et al. 2002), and are more likely to be identified as displaying disruptive behavior (Nguyen et al. 2007). This study did not find a significant association between school-level socio-economic status and performance on the state assessment. This finding is in agreement with those of Malmgren et al. 2005 who found that socioeconomic status is not a predictor of performance for students with disabilities.

The results of this study did not indicate significant results related to student gender. This is in agreement with research reported by Nelson et al. (2004). Additionally, this study did not find statistically significant results in regard to grade level. This is consistent with information reported by Reid et al. (2004) who reported no statistically significant differences across age groups and Nelson et al. (2004) who indicated that as student age increases, reading deficits do not increase.

Many of the findings in this study provide an argument for having students with emotional disturbance remain in a general education mainstream setting for reading when possible. The results of this study indicate the students who are instructed by a general education teacher in a general education mainstream setting perform better on the state reading assessment that those students who are in an in-class support setting.

The results of this study do not tell us why these students are not performing as well as their peers who are instructed in a general education mainstream setting. A few possible explanations may be 1) that best practices for students with emotional disturbance are not clearly defined (Neel, 2006), 2) that there exists a lack of appropriate pre-service teacher training (Wehby et al. 2003), 3) that student behavior is interfering with the teacher's (general or special education) ability to teach (Sutherland et al. 2008), 4) that some of the students are not prepared to meet the academic standards in this setting (Fuchs & Young, 2006; Hardman & Dawson, 2008), or 5) that there is undervaluing of the usefulness of statewide assessments by teachers and principals (Crawford & Tindal, 2006).

Limitations

While this study has high reliability and is the first one of its kind, it also contains limitations such as generalizability. This data represents only one large school district. Using data specific for one district limits the generalizability of data to the district under study, or to other districts which have similar characteristics to this district. A second limitation is the lack of knowledge regarding the fidelity of IEP implementation and present levels of student performance. Individual student progress

may be affected by any lack of appropriate implementation of the IEP. Additionally, the performance results of this study should be read with caution as these results are limited to only those students who participated in the state assessment. Additional performance data was not gathered on those students who did not participate in the state assessment. A third limitation is that the possible English Language Learner status of the Hispanic students was not gathered for this study. However, demographic make-up of the participants of this study closely aligns with those of the district and the state. Therefore, the results of this study provide a positive contribution to the available literature on students with emotional disturbance.

Implications

Results regarding the influence of instructional setting, IQ, ethnicity and school-level socioeconomic status on the participation in and performance on state-wide reading assessments from this and other studies that may follow can be used to assist educators in developing enhanced instructional programs that lead to improved outcomes for students with disabilities. Results such as these will call on educators to consider the influence they have on the academic progress of students with emotional disturbance regardless of gender, socioeconomic status, ethnicity, and in many cases, IQ. It appears that these factors have limited statistical influence on student progress when compared to the influence of the setting for reading instruction. Educators can take these results into consideration when planning reading instruction for these students.

Considering the unique individual needs of these students will assist educators in planning programming that will ameliorate the challenges associated with educating this

population. Enrolling a student in an in-class support, resource or self- contained setting may reduce their chance to participate in the state accountability assessment. While the results of this study indicate that instructional setting in reading does not appear to be an issue of concern for students with an IQ above 120 or below 69, these results do call attention to the students in the middle. If teachers and administrators are properly trained to work with students with emotional disturbance and given the tools they need to support the instruction of these students in a general education setting, they will be better able to design effective programs.

Students instructed in a general education mainstream setting are more likely to take the state accountability assessment than those in a special education setting. The unique strengths and challenges of students with emotional disturbance should be considered when making accountability decisions.

Conclusions

While instructional setting, IQ, and ethnicity all appear to affect which students participated in the TAKS reading test, only instructional setting provided any predictive information regarding student performance. This may indicate that the within student factors are less predictive of student success than are within school factors. This is encouraging, as educators do have some degree of influence over the within school factors, and little to no influence over within student factors.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter provides a summarization of three manuscripts in the research series: Participation and Performance of Students with Emotional Disturbance in Statewide Accountability Assessment in Reading. The theme of these three manuscripts focuses on students with emotional disturbance and their participation in and performance on a state accountability assessment in the area of reading.

There is a call in current literature regarding the need for additional research in the areas of participation and performance of students with emotional disturbance on statewide accountability assessments (Thurlow et al. 2000; Ysseldyke et al. 2004). Additionally, there is a need for more information regarding the student and school level factors that affect the participation and performance of students with emotional disturbance on statewide accountability assessments (Reid et al. 2004; Ysseldyke et al. 2004). It is the assumption of both the No Child Left Behind Act (NCLB) and the Individuals with Disabilities Education Act (IDEA) that the inclusion of students with disabilities, including those with emotional disturbance, in statewide accountability assessments will result in improved outcomes for students with emotional disturbance (Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezen, Sharp & Hawes, 2004; Crawford & Tindal, 2006; Hardman & Dawson, 2008). It is also believed that the results produced by students with emotional disturbance on statewide accountability assessments can further inform educators on the appropriate programming for these students (Thurlow, Lazarus, Thompson, & Morse, 2005).

Participation

The first study indicates the participation of students with emotional disturbance in statewide accountability assessments in the area of reading. Descriptive statistics are used to summarize data reflecting the rate of students with emotional disturbance participating in the state level reading assessment.

The first finding indicates that 58% of the students with emotional disturbance in the grades 3 through 8 and 10 participated in a state level reading assessment. These results, indicating that almost half of the population of students with emotional disturbance is not participating in the state level test in reading, are consistent with research that suggests these students are not prepared to participate in grade level accountability assessments (Nelson, Benner, Lane, & Smith, 2004; Reid, Gonzalez, Nordess, Trout, & Epstein, 2004; Thurlow, 2002; Trout, Nordess, Pierce & Epstein, 2003).

The second finding indicates that there is a disproportionate distribution by gender of students with emotional disturbance who participated in the state level reading assessment. While there are a greater number of males students identified with emotional disturbance, females are taking the test at a higher rate (65% female: 56% male).

The third finding indicates that there is a disproportionate distribution by ethnicity of students with emotional disturbance who participated in the state level reading assessment. In this study, White and Asian students participated in the test at a higher rate (63% and 100%) than did their African American and Hispanic peers (34%

and 55%). These findings are consistent with current literature (Bollmer, Betherl, Garrison-Morgan & Brauen, 2007; Samuels, 2007).

The fourth finding indicates that students who attend a school that has a high socioeconomic status are twice as likely to participate in the state level reading assessment. This finding is consistent with results reported by Cook, Cameron, and Tankersly (2007) who report greater levels of teacher concern and lower levels of teacher rejection in higher SES schools.

The fifth finding indicates that students with lower cognitive abilities participated in the state reading assessment at a lower rate than did those with higher cognitive abilities. This finding is consistent with research reported by Fuchs & Young (2006) indicating that intelligence does influence student response to reading instruction.

The sixth finding indicates that there is a disproportionate distribution by instructional setting in reading of students with emotional disturbance who participated in the state reading assessment. Students who received reading instruction in a general education setting, whether mainstream or with in-class support, participated in the TAKS Reading assessment at a higher rate (68% in class support and 85% mainstream) than those who received reading instruction in a special education setting (5% Resource and 38% self-contained).

The seventh finding indicates that third grade students participated in the TAKS Reading assessment at a lower rate (33%) than any other grade. Sixth grade students participated in the assessment at a higher rate (81%) than any other grade, except for the

two twelfth grade students who both participated in the assessment. Results indicate that all other grade levels participated at rate close to average (41% to 64%).

This study examined the participation of students with emotional disturbance in a statewide reading assessment. The results of this study indicate that nearly half of the students with emotional disturbance in the school district studied do not participate in statewide assessment in reading. Students with emotional disturbance who did participate differed from those who did not participate in the areas of gender, ethnicity, socioeconomic status, cognitive ability, and instructional setting.

Study one provides a descriptive picture of the participation of students with emotional disturbance in the statewide assessment for the participating school district. District level school administrators may want to replicate a study such as this one in order to gain similar information on the students with emotional disturbance, as well as other students with other disabilities, in their district. Conducting similar studies on students from other disability categories will provide school administrators with a detailed descriptive analysis of the special programs for which they are responsible.

More research is needed regarding the relationship between student and school level factors and the academic status of students with emotional disturbance. One line of suggested research is that of the performance of students with emotional disturbance on statewide assessments.

Performance

The second research study indicates the extent to which students with emotional disturbance meet state proficiency standards on state assessment in reading. Descriptive

statistics are used to summarize data reflecting the rate of students with emotional disturbance meeting proficiency standards on the TAKS assessment in reading.

The first finding in study two indicates that of the total 266 students with emotional disturbance considered for this study, 44 % met proficiency standards in the area of reading. Of the 148 students with emotional disturbance who took the TAKS assessment in reading, 79% met proficiency standards in the spring of 2007. While almost half of the students with emotional disturbance considered for this study did not participate in the assessment, the high number of test takers who passed the test is encouraging. The number of students with emotional disturbance included in grade level state assessments will only increase as districts strive to meet compliance standards set forth in state and federal guidelines.

The second finding in study two indicates that although students with emotional disturbance are disproportionately male, the percentage of males and females passing a state achievement test in reading is equal.

The third finding in study two indicates that there is a disproportionate distribution of students with emotional disturbance who met proficiency standards by ethnicity. Overall, 79% of students with emotional disturbance met proficiency standards on the TAKS test in reading. The results of this study indicate that African American, White and Asian students with emotional disturbance pass the test at a higher rate than Hispanic students. This finding highlights a possible language barrier for Hispanic students. This finding also highlights that when African American students are given a chance to take such a test, they are just as likely to pass it.

The fourth finding in study two indicates that students who attend a school with a low socioeconomic status are slightly more likely to meet proficiency standards than students who attend a school with a high socioeconomic status. This finding may encourage educators to increase the number of students from low socioeconomic schools to participate in state assessments since these results indicate when they are given a chance to take such a test, they are just as likely to pass it.

The fifth finding in study two indicates that students with lower cognitive abilities pass the test at a lower rate than those with higher cognitive abilities. Yet, a majority of the students in the borderline and low average ranges who took the test did pass. These results are encouraging for the students in these two ability ranges.

The sixth finding in study two is the distribution of students with emotional disturbance who passed the test is disproportionate by instructional setting in reading. Most of the students who passed the test received their reading instruction in a general education setting, either with in-class support or with no specialized assistance. However, those who receive their reading instruction in a special education resource classroom pass at a higher rate than those who received their reading instruction in a general education classroom. Although students in a resource setting were more likely to pass the test than students in any other setting, these results must be interpreted with caution as the number of students in a resource setting (3) was very small. These results are encouraging in that more students who receive reading instruction in resource and self-contained settings may have the ability to meaningfully participate in state assessments.

The seventh finding in study two is that eighth grade students and tenth grade students passed the test at a lower rate than any other grade while the fifth graders passed the test at a higher rate than any other grade, except for the eleventh and twelfth grade students who all met proficiency standards on the test. The high rate of students who pass the test at grades 11 and 12 may be due to the variety of tutorial supports that are made available to these students who are required to pass the test in order to graduate.

Results of this study suggest that when students are given the opportunity to participate in state assessments, many will pass. An alternate conclusion may be that educators are only letting those students they are sure will pass actually take the test. Although only 44% of the total number of students with emotional disturbance in this district met proficiency standards on the statewide assessment, 79% of the actual test takers met proficiency standards. These results support the increased participation of students with emotional disturbance in state assessments. If educators hold these students to high expectations, many are able to achieve at high levels.

Higher expectations can guide improved instruction, increased participation in the general curriculum and improved performance (Ysseldyke et al. 2004). Educators today have the responsibility to use data from a variety of sources, including state assessments, to develop appropriate, yet challenging programs for all students, including those with emotional disturbance. The trend in many state policy changes is toward an increase in the participation of students with disabilities, including those with emotional disturbance, in state assessments (Thurlow et al. 2000). If students with emotional

disturbance are to perform well on these assessments, it is necessary for them to be meaningfully engaged in the general education curriculum. Results of this study indicate that when this occurs, students with emotional disturbance are likely to pass the state assessment.

School district administrators may want to replicate similar studies in their own district that focus not only on students with emotional disturbance, but also on students from other disability categories. This study provided a rich, descriptive picture of the performance of students with emotional disturbance in the statewide assessment for the participating school district.

Participation and Performance

The third research study determines the relationship between the instructional setting in reading of a student with emotional disturbance and his or her participation in a state assessment in reading. The chi-square procedure and binary logistic regression analysis results are used to determine the effect specific factors have on the relationship between instructional setting in reading and student participation in and performance on the TAKS Reading Assessment (Glass and Hopkins, 1996).

The first finding in study three indicates that a statistically significant association exists between a student's participation in and performance on the TAKS reading assessment and his or her instructional setting in reading. This finding calls attention to a need for thoughtful decision-making in regard to a student's placement for reading instruction. Students with emotional disturbance are more likely to reap the benefits of school reform if they are included in statewide assessments (Thurlow, 2000).

The second finding in study three indicates that in regard to instructional setting, students instructed in an in-class support setting are twice as likely to fail the state assessment in reading. This finding calls into question the increased pressure schools are under to move increasing numbers of children into inclusive settings (Wehby, Lane, & Falk, 2003). The inclusion of students with emotional disturbance in inclusive settings presents challenges for schools (Simpson, 2004), and these students are not likely to be prepared to achieve high standards without a commitment from the schools to comprehensively address their social, behavioral and academic needs (Bradley, Henderson & Monfore, 2005).

The third finding in study three indicates that for students with an IQ above 120 and below 69, participation in and performance on the state assessment is 100% predicative. All of the students with an IQ above 120 both participated and passed the test, whereas, none of the students with an IQ 69 and below participated. For the students in the middle – the students with an IQ above 70 and below 119 – statistically significant results were found for participation, indicating that IQ does impact participation decisions. Significant results were not found in the area of performance; however, it is worth noting that as IQ increases so does performance on the state assessment. This is in line with information reported by Fuchs & Young (2006) and Sabornie et al. (2005) who have identified IQ as a predictor for performance.

The fourth finding in study three indicates that when controlling for IQ and instructional setting, ethnicity was not found to be a statistically significant predictor for participation or performance. This finding is surprising in light of the focus on the

overrepresentation of African American students in special education settings (Coutinho et al. 2002; & Hosp & Reschly, 2004).

The fifth finding in study three indicates that when controlling for IQ and instructional setting school-level socioeconomic status was not found to be a statistically significant predictor for participation in or performance on the state assessment. This is in agreement with findings reported by Malmgren et al. 2005, who reported that socioeconomic status is not a predictor for student performance.

While instructional setting and IQ both appear to affect which students participated in the TAKS reading test, only instructional setting provided any predictive information regarding student performance. The results of this study indicate that within student factors may be less predictive of student success than are within school factors. This is encouraging because while educators do have some degree of influence over within school factors, they have little to no influence over within student factors.

The common significant predictor variable between participation and performance is instructional setting in reading. This is in line with research conducted by Malmgren et al. (2005) who report that the performance of the students in general education is predictive of the performance of students receiving special education services. When special education students are enrolled in general education classes, their progress is no longer solely the responsibility of a special education teacher. If students with emotional disturbance are enrolled in general education classes for reading, they are more likely to receive grade level instruction and are more likely to participate in state assessments.

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APPENDIX

TABLES

Table 1

Ethnic Distribution of Three Student Populations

Population source	African American	Hispanic	White	Native American	Asian/Pacific Islander
US	15.6	19.7	57.6	0.7	6.4
Texas	14.7	45.3	36.5	0.3	3.1
District	9.2	25.7	56.8	0.2	8.2

Table 2

Populations

Population source	Total number of students	Number of SPED students	Number of ED students
US 03-04	48,270,100	6,634,000 (.13)	489,000 (.07)
Texas 05-06	4,505,572	500,037 (.11)	37,755 (.07)
District 05-06	47,808	4,154 (.9%)	307 (.07%)

Table 3

Results by Gender

	Number and percent of ED in sample	Number and percent of test takers by gender	Number and percent of test takers within gender
Male	200 (.75)	112 (.72)	112 (.56)
Female	66 (.25)	43 (.28)	43 (.65)
Total	266	155	

Table 4

Results by Ethnicity

	Number and percent of ED in sample	Number and percent of test takers by ethnicity	Number and percent of test takers within ethnicity
African Am	38 (.14)	13 (.09)	13 (.34)
Hispanic	40 (.15)	22 (.14)	22 (.55)
White	186 (.70)	118 (.76)	118 (.63)
Asian	2 (.1)	2 (.1)	2 (100.0)
Total	266	155	

Table 5

Results by Socioeconomic Status of Campus

	Number and percent of ED in sample	Number and percent of test takers SES	Number and percent of test takers within SES
Not at risk	160 (.60)	102 (.66)	102 (.64)
At risk	106 (.40)	53 (.34)	53 (.50)
Total	266	155	

Table 6

Results by Cognitive Ability

	Number and percent of ED in sample	Number and percent of test takers by IQ	Number and percent of test takers within IQ
Deficient	7 (.03)	0 (.0)	0(.0)
Borderline	32 (.12)	11 (.07)	11 (.34)
Low average	60 (.23)	22 .(15)	22 (.37)
Average	131 (.50)	93 (.61)	93 (.71)
High average	24 (.09)	20 (.13)	20 (.83)
Superior	5 (.02)	5 (.03)	5 (100.0)
Very superior	1 (.01)	1 (.01)	1 (100.0)
Total	260	152	

Table 7

Results by Instructional Setting in Reading

	Number and percent of ED in sample	Number and percent of test takers by setting	Number and percent of test takers within setting
Self-Contained	24 (.09)	9 (.06)	9 (.38)
Resource	56 (.21)	3 (.02)	3 (.05)
In class support	91 (.34)	62 (.40)	62 (.68)
Gen educ mainstream	95 (.36)	81 (.52)	81 (.85)
Total	266	155	

Table 8

Results by Grade

	Number and percent of ED in sample	Number and percent of test takers by grade	Number and percent of test takers within grade
3rd	18 (.07)	6 (.04)	6 (.33)
4th	30 (.11)	16 (.10)	16 (.53)
5th	27 (.10)	11 (.07)	11 (.41)
6th	36 (.14)	29 (.19)	29 (.81)
7th	22 (.08)	13 (.08)	13 (.59)
8th	33 (.12)	20 (.13)	20 (.61)
9th	44 (.17)	28 (.18)	28 (.64)
10th	35 (.13)	18 (.12)	18 (.51)
11th	19 (.07)	12 (.08)	12 (.63)
12th	2 (.01)	2 (.01)	2 (100.0)
Total	266	155	

Table 9

Passing Results by Gender

Gender	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of gender who took test	Number and percent of passers for each gender by total test passers	Number and percent of passers in each gender by total test takers in that gender	Number and percent of passers in each gender by total ED in that gender
Male	200 (.75)	105 (.71)	105(.53)	83/117 (.71)	83/105 (.79)	83/200 (.42)
Female	66 (.25)	43 (.29)	43 (.65)	34/117 (.29)	34/43 (.79)	34/66 (.52)
Total	266	148 (.56)		117/148 (.79)		117/266 (.44)

Table 10

Passing Results by Ethnicity

Ethnicity	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of ethnicity who took test	Number and percent of passers in each ethnicity by total test passers	Number and percent of passers in each ethnicity by total test takers in that ethnicity	Number and percent of passers in each ethnicity by total ED in that ethnicity
African Am	38 (.14)	13 (.09)	13 (.34)	12/117 (.10)	12/13 (.92)	12/38 (.32)
Hispanic	40 (.15)	20 (.14)	20 (.50)	12 (.10)	12 (.60)	12 (.30)
White	186 (.70)	113 (.76)	113 (.61)	91 (.78)	91 (.81)	91 (.49)
Asian	2 (.1)	2 (.1)	2 (100)	2 (.02)	2 (100)	2 (100)
Total	266	148 (.56)		117/148 (.79)		117/266 (.44)

Table 11

Passing Results by Socioeconomic Status of Campus

SES risk level	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of SES who took test	Number and percent of passers in each SES by total test passers	Number and percent of passers in each SES by total test takers in that SES	Number and percent of passers in each SES by total ED in that SES
Not at risk	160 (.60)	98 (.66)	98 (.61)	75/117 (.64)	75/98 (.77)	75/160 (.47)
At risk	106 (.40)	50 (.34)	50 (.47)	42 (.36)	42 (.84)	42 (.40)
Total	266	148 (.56)	148	117/148 (.79)		117/266 (.44)

Table 12

Passing Results by Cognitive Ability

Cognitive ability category	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of IQ who took test	Number and percent of passers in each IQ range by total test passers	Number and percent of passers in each IQ range by total test takers in that IQ range	Number and percent of passers in each IQ range by total ED in that IQ range
Deficient	7 (.03)	0 (.0)	0(.0)	0 (.0)	0 (.0)	0 (.0)
Borderline	32 (.12)	10 (.07)	10 (.31)	7/114 (.06)	7/10 (.70)	7/32 (.23)
Low average	60 (.23)	21.(14)	21 (.35)	14 (.12)	14 (.67)	14 (.23)
Average	131 (.50)	89 (.61)	89 (.68)	70 (.61)	70 (.79)	70 (.53)
High Average	24 (.09)	20 (.13)	20 (.83)	18 (.16)	18 (.90)	18 (.75)
Superior	5 (.02)	5 (.03)	5 (100)	5 (.03)	5 (100)	5 (100)
Very superior	1 (.01)	1 (.01)	1 (100.0)	1 (.01)	1 (100)	1 (.01)
Total	260	146 (.56)		115/145 (.79)	115	115/260 (.44)

Table 13

Passing Results by Instructional Setting in Reading

Instructional setting	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of setting who took test	Number and percent of passers in each setting by total test passers	Number and percent of passers in each setting by total test takers in that setting	Number and percent of passers in each setting by total ED in that setting
Self-Contained	24 (.09)	8 (.05)	8 (.04)	7/117 (.06)	7/8 (.88)	7/24 (.29)
Resource	56 (.21)	3 (.02)	3 (.05)	3 (.03)	3 (100)	3 (.05)
In class support	91 (.34)	61 (.41)	61 (.67)	42 (.36)	42 (.69)	42 (.46)
Gen educ mainstream	95 (.36)	76 (.52)	76 (.80)	65 (.55)	65 (.86)	65 (.68)
Total	266	148 (.56)		117/148 (.79)		117/266 (.44)

Table 14

Passing Results by Grade

Grade	Number and percent of ED students in sample	Number and percent of test takers	Number and percent of grade who took test	Number and percent of passers in each grade by total test passers	Number and percent of passers in each grade by total test takers in that grade	Number and percent of passers in each grade by total ED in that grade
3rd	18 (.07)	6 (.04)	6 (.33)	5/117 (.04)	5/6 (.83)	5/18 (.28)
4th	30 (.11)	16 (.10)	16 (.53)	13 (.11)	13 (.81)	13 (.43)
5th	27 (.10)	11 (.07)	11 (.41)	10 (.09)	10 (.91)	10 (.37)
6th	36 (.14)	27 (.18)	27 (.75)	21 (.18)	21 (.78)	21 (.58)
7th	22 (.08)	13 (.08)	13 (.59)	10 (.09)	10 (.77)	10 (.45)
8th	33 (.12)	19 (.13)	19 (.58)	12 (.10)	12 (.63)	12 (.36)
9th	44 (.17)	26 (.18)	26 (.59)	23 (.19)	23 (.88)	23 (.52)
10th	35 (.13)	17 (.11)	17 (.49)	10 (.09)	10 (.59)	10 (.29)
11th	19 (.07)	12 (.08)	12 (.63)	12 (.10)	12 (100.0)	12 (.63)
12th	2 (.01)	1 (.01)	1 (.50)	1 (.01)	1 (100.0)	1 (.50)
Total	266	148 (.56)		117/148 (.79)		117/266 (.44)

Table 15

Logistic Regression for Participation Status in Reading and Instructional Setting in Reading

Variable	B	S.E.	Wald	Sig.	Exp (b)
Mainstream			57.583	.000*	
Selfcontained	2.266	.511	19.636	.000*	9.643
Resource	4.627	.660	49.108	.000*	102.214
In Class	.996	.367	7.375	.007*	2.706
Constant	-1.755	.289	36.782	.000*	.173

Note. Cox & Snell R^2 = .346, Nagelkerke R^2 = .466, Model x^2 = 112.940, p< .05.

Table 16

Logistic Regression for Participation Status in Reading and Ethnicity

Variable	B	S.E.	Wald	Sig.	Exp (b)
White			10.555	.014*	
AfricanAmer	1.205	.374	10.366	.001*	3.337
Hispanic	.351	.352	.989	.320	1.420
Asian	-20.652	28420.722	.000	.999	.000
Constant	-1.755	.289	36.782	.000*	.173

Note. Cox & Snell R^2 = .049, Nagelkerke R^2 = .066, Model x^2 = 13.324, p< .05.

Table 17

Logistic Regression Predicting Participation Status With School Level Socio Economic Status

Variable	B	S.E.	Wald	Sig.	Exp(B)
SES low	.565	.255	4.920	.027*	1.759
Constant	-.565	.164	11.784	. 001	.569

Note. Cox & Snell R^2 = .018, Nagelkerke R^2 = .025, Model x^2 = 4.946, $p < .05$.

Table 18

Logistic Regression Predicting Participation Status with IQ – With Select Cases Removed

Variable	B	S.E.	Wald	Sig.	Exp(B)
Average			31.658	.000*	
Borderline	1.542	.419	13.535	.000*	4.672
Low Average	1.442	.330	19.093	.000*	4.227
High Average	-.714	.581	1.514	.218	. 489
Constant	-.895	.193	21.610	.000*	.409

Note. Cox & Snell R^2 = .131, Nagelkerke R^2 = .177, Model x^2 = 34.719, $p < .05$

Table 19

Logistic Regression Predicting Participation Status With Setting - With Select Cases Removed

Variable	B	S.E.	Wald	Sig.	Exp(B)
Mainstream		52.944		.000*	
Selfcontained	2.297	.552	17.332	.000*	9.949
Resource	4.430	.663	44.665	.000*	83.929
In Class	.863	.372	5.394	.020*	2.371
Constant	-1.678	.291	33.236	.000*	.187

Note. Cox & Snell R^2 = .332, Nagelkerke R^2 = .448, Model x^2 = 99.606, p <.05

Table 20

Logistic Regression for Participation Status in Reading and Ethnicity – With Select Cases Removed

Variable	B	S.E.	Wald	Sig.	Exp (b)
White			5.670	.129	
AfricanAmer	.912	.393	5.388	.020*	2.489
Hispanic	.332	.355	.875	.350	1.393
Asian	-20.670	28420.722	.000	.999	.000
Constant	-.532	.157	11.433	.001*	.587

Note. Cox & Snell R^2 = .031, Nagelkerke R^2 = .042, Model x^2 = 7.902, p< .05.

Table 21

Logistic Regression Predicting Participation Status With Instructional Setting in Reading, IQ - With Select Cases Removed, and Ethnicity

Variable	B	S.E.	Wald	Sig.	Exp(B)
Mainstream			45.992	.000*	
Selfcontained	2.336	.584	16.006	.000*	10.341
Resource	4.167	.676	38.036	.000*	64.539
In Class	.786	.385	4.156	.041*	2.194
Average			12.897	.005*	
Borderline	1.071	.516	4.304	.038*	2.919
Low Average	1.075	.401	7.184	.007*	2.931
High Average	-.892	.723	1.523	.217	.410
White			2.375	.498	
African Amer	. 685	.510	1.806	.179	1.984
Hispanic	-.229	.465	.242	.623	.796
Asian	-20.371	28419.945	.000	.999	.000
Constant	-1.956	.359	29.700	.000*	.141

Note. Cox & Snell R^2 = .377, Nagelkerke R^2 = .509, Model x^2 = 116.965, p <.05

Table 22

Logistic Regression Predicting Performance on Reading With Instructional Setting in Reading

Variable	B	S.E.	Wald	Sig.	Exp (b)
Mainstream			5.754	.124	
Selfcontained	-.169	1.118	.023	.880	.844
Resource	-19.426	23205.422	.000	.999	.000
In Class	.983	.427	5.291	.021*	2.673
Constant	-1.776	.326	29.691	.000*	.169

Note. Cox & Snell R^2 = .049, Nagelkerke R^2 = .076, Model x^2 = 7.369, p> .05.

Table 23

Logistic Regression Predicting Performance on Reading With Collapsed Instructional Setting in Reading

Variable	B	S.E.	Wald	Sig.	Exp (b)
Mainstream			6.344	.042*	
SC/Resource	-.526	1.098	.229	.632	.591
In Class	.983	.427	5.291	.021*	2.673
Constant	-1.776	.326	29.691	.000*	.169

Note. Cox & Snell R^2 = .044, Nagelkerke R^2 = .069, Model x^2 = 6.696 , p< .05.

Table 24

Logistic Regression for Performance on Reading With Collapsed Instructional Setting in Reading and IQ – With Select Cases Removed

Variable	B	S.E.	Wald	Sig.	Exp (b)
Average			2.985	.394	
Borderline	.632	.762	.688	.407	1.881
Low Average	.655	.545	1.447	.229	1.925
High Average	-.626	.806	.604	.437	.535
Mainstream			4.697	.096	
SC/Resource	-.380	1.128	.113	.736	.684
In Class	.889	.444	4.019	.045*	2.433
Constant	-1.776	.387	21.048	.000	.169

Note. Cox & Snell R^2 = .060, Nagelkerke R^2 = .092, Model x^2 = 8.687, p> .05.

Table 25

Logistic Regression for Performance on Reading With Collapsed Instructional Setting in Reading, IQ – With Select Cases Removed and Ethnicity

Variable	B	S.E.	Wald	Sig.	Exp (b)
Average			2.247	.523	
Borderline	.622	.846	.542	.462	1.863
Low Average	.566	.563	1.012	.314	1.761
High Average	-.609	.817	.555	.456	.544
White			3.860	.277	
AfricanAmer	-1.244	1.103	1.270	.260	.288
Hispanic	.808	.564	2.058	.151	2.244
Asian	-19.984	28418.453	.000	.999	.000
Mainstream			4.833	.089	
SC/Resource	-.513	1.157	.197	.657	.599
In Class	.909	.455	3.994	.046*	2.482
Constant	-1.814	.411	19.506	.000	.163

Note. Cox & Snell R^2 = .097, Nagelkerke R^2 = .149, Model x^2 = 14.292, p> .05.

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